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ABSTRACT

The overall goal of the Vocational Education Information Services project was to support vocational education in Indiana by facilitating more efficient use of information and by developing more effective products for wide dissemination. First, a needs assessment was conducted to determine specific user populations and user needs for information and services. Next, a plan for implementing the information system was developed, types of materials to be included in the collection were identifed, and methods of cataloging and recording these materials were analyzed. Agreements were made with three local information brokers to obtain literature search services and with the Indiana University Libraries to borrow books and use their computer terminals for searching. Topics of interest for wide dissemination were identified. Articles about exemplary vocational education projects funded by the state were solicited for publication in a newsletter. Copies of the newsletter were disseminated to state vocational educators and administrators. In addition, eight reports of high quality Indiana research and development products were produced and disseminated. (Author/BM)

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FINAL REPORT

The Continuation and Expansion of a Research and Development Information System

by

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JoAnn Brooks

Project No. 82-77-III-12

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FINAL REPORT ABSTRACT

A. The PRODUCT(S) and SERVICE(S) developed and delivered by this project are:

A.1. A statistical analysis of the state's information users, their habits and needs.
A.2. A plan for implementing the information service which proposes a limited selection policy, an acquisitions procedure, and an organization for the collection.
A.3. A collection of cataloged, stored, and processed materials.
A.4. Responses to 45 requests for information.
B.1. Information produced in R&D projects, transformed into clear, direct language suited to a wide audience of persons interested in vocational education.
B.2. Issues 16, 17, 18, and 19 of *Communique*.
B.3. Report numbers 3, 4, 5, and 6 in the *Information Series* and editorial consultation and service on five reports of SBVTE-funded projects.

B. The specific OBJECTIVES of the project are:

A.1. Conduct a needs assessment study to determine specific user populations and user needs for information and services.
A.2. Develop a flexible, multifunctional plan for implementing the information service.
A.3. Catalog and store reports and products currently available, which were produced in or received by the state.
A.4. Offer retrieval and dissemination services within resource limits.
B.1. Abstract, synthesize, edit, and disseminate information about selected Indiana R&D efforts through a series of newsletters and report publications.
B.2. Produce four (4) issues of the newsletter *Communique* for a target audience of state teachers, administrators, and guidance directors at all levels.
B.3. Produce eight (8) reports of high quality Indiana R&D products and disseminate them to a target audience of state and national educators and administrators.

C. The PROCEDURES for achieving these objectives are:

A.1. Developed and mailed a questionnaire to three sample groups of Indiana vocational educators.
A.2. Conducted a review of information and library science literature, and sought input from local and national information brokers and librarians operating similar programs.
A.3. Identified the types of materials to be included in the collection and analyzed methods of cataloging and recording the diverse types of materials.
A.4. Made agreements with three local information brokers to obtain literature search services and with the I.U. Libraries to borrow books and use their computer terminals for searching the Lockheed system.
B.1. Identified topics of interest for wide dissemination and transformed the information produced by the R&D projects through author revision, editorial board recommendations, and editing.
B.2. Solicited and edited articles about exemplary SBVTE-funded projects for publication in *Communique*, and disseminated the newsletters to state and national vocational educators and administrators.
B.3. Chose and transformed products for the *Information Series* and gave editorial consultation and services to three funded projects whose products were designated for wide dissemination.

D. The expected OUTCOMES for or potential IMPACTS on vocational education are:

A. That vocational educators and administrators have the basis to make more informed decisions to improve educational programs because their information needs have been identified, materials are organized and accessible so information can be located and used, and information resources are available to all Indiana educators.
B. More widespread and more efficient use of R&D information, products, and projects, improved coordination of state dissemination efforts, and increased visibility and status for research as a means to achieve more effective vocational programs.

Project population

Groups	Numbers of persons: Impacted by project	Conducting or giving input
students		
secondary		
postsecondary		
adult		
school personnel		
secondary	5,000	20
postsecondary	1,000	20
adult		
other		
teacher educators	65	10
employers		
employees		
other: state and national administrators	400	50
special needs		
disadvantaged		
handicapped		
migrant		
minority		
limited English proficiency		
other: combination of above	6,000	10

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CHAPTER I

Introduction

Statement of Overall Goal

Vocational Education Information Services is a project that promotes effective communication by increasing the flow of information among vocational educators. Its overall goal is to support vocational education in Indiana by facilitating more efficient use of information and by developing more effective products for wide dissemination. There are two components of the services: (1) an *information organization and retrieval service* and (2) a *publication and dissemination service*.

Statement of the Problem

Information needs

The overriding purpose of research, evaluation, and development projects in vocational education is to generate information in forms which will improve vocational programs. The volume of such information has increased in staggering proportions throughout the nation.

Vocational educators in Indiana, especially local decision makers and researchers, need access to information about research, evaluation, and development projects done around the world. It has been difficult for them to obtain reliable, organized, and current information about problems similar to those which they face, because Indiana has not had an adequate information service. Without such a service they have often duplicated the efforts of others or failed to make fully knowledgeable decisions.

Frequently, these educators have not even known about projects done within the state. The SBVTE funded 222 projects (Parts C and D) between 1972 and 1977. There has been no adequate method of cataloging, storing, and disseminating the results of these state projects so that information in them could be used. Indiana has needed a flexible and comprehensive system for handling its own research and development products.

Publication needs

A survey of the readers of *Communique*, this project's newsletter, has indicated a clear need for publication and dissemination of information about state projects and other issues that concern vocational educators. Readers suggested that this project's *Information Series* of project reports and program abstracts be continued, expanded, and widely disseminated.

State priorities

The vocational education amendments of 1968 (Part C, Sec. 131) and the recent legislation (PL 94-482, Part A, Sec. 131) ask states to employ persons to disseminate information derived from the projects which they fund.

Among the nine specific needs which the *Indiana State Plan for Vocational Education* outlines for supportive services and program improvement are these: "Increased communication among vocational educators and related publics" (III, B, 3), and an "Improved coordination, implementation, and dissemination system for research and development activities" (III, B, 8) (p. 78). One FY 1978 State Plan objective for vocational education coordinated efforts is "to improve communications through the development of a statewide and regional system" (p. 87).

Nearly all state research and exemplary priorities emphasize the development or implementation of materials, systems, programs, or plans. All of these efforts are useless unless their products are disseminated and incorporated into programs which improve education. A comprehensive information system is essential to achieving the most fundamental state objectives because it will insure the widespread knowledge and use of research and development products and will upgrade the quality as well as the image of vocational education programs in Indiana.

Project Summary

The project developed the Information Organization and Retrieval Service [hereafter called the Information Service]. It is a comprehensive, multifunctional system for acquiring, organizing, storing, and disseminating research and development information which will meet the identified needs of vocational educators in Indiana. The project's information specialist analyzed the components of comprehensive information systems, including the criteria and methods of selection, acquisition, organization, storage, retrieval, and dissemination, she conducted a user needs survey, developed a plan to serve the information needs of Indiana vocational educators, and developed a plan to catalog, store, and retrieve SBVTE-acquired materials. She also began offering information retrieval and dissemination services to state agency staffs and their referrals.

The project continued the Publication and Dissemination Service [hereafter called the Publication Service]. Its purpose is to develop and disseminate publications of quality Indiana research and development products to appropriate state and national target audiences. This year's publications included four (4) quarterly issues of the newsletter *Communique* and six (6) reports in the *Information Series*. The project's editor identified topics; consulted with authors; selected, revised, and edited material; developed publication formats; and oversaw production and dissemination of the publications. An editorial board served as a panel of referees and advisors to the publication and dissemination service.

CHAPTER II

Objectives, Procedures, and Outcomes

A. Information Organization and Retrieval Service

Needs assessment

Objective A.1. The first objective of the Information Service was to conduct a needs assessment study to determine specific user populations and user needs for information and services.

Procedures. After reviewing the literature, the information specialist developed and tested two parallel questionnaires. These were mailed to three sample groups of Indiana vocational educators; state agency personnel, funded project personnel, and a random sample. A total of 152 questionnaires (64.6%) were returned, and the resultant data was analyzed using a statistical package program.

Outcomes. The findings include demographic data on the sample, and data on the samples' familiarity with sources and formats of information, needs for information, sources of information used, and preferences for future services. The data is presented as simple frequencies in most cases.

The conclusions drawn from the findings are that state agency personnel are the most knowledgeable information users and are frequently used as sources of information. In addition, it was concluded that Indiana vocational educators prefer personal contact and convenient sources for information, do not use many available sources of information, most frequently need descriptive information and numerical data, prefer to borrow documents they need, are not familiar with microforms and microform equipment, are willing to wait for information, and project that they will use literature search services.

The recommendations for the Information Service drawn from these conclusions are:

- State agency personnel should be the initial target audience.
- Services should be convenient for the users.
- Information Service staff should be in personal contact with users.
- Information Service staff should help users identify appropriate sources.
- Selection policy should be based on identified information needs.
- Paper copies should be made available for loan.
- The Information Service should stress accuracy over speed.
- Computer literature searches should be provided to those who need them.

An analysis of the survey findings and copies of the questionnaires are presented in Appendix A.

Implementation plan

Objective A.2. The second objective of the Information Service was to develop a flexible, multifunctional plan for implementing the service that would: (1) consider alternative data systems, (2) be compatible with other state systems, (3) include all types of information services that will eventually be needed by user populations, (4) consider relative costs of alternative systems and services, (5) be flexible enough to allow individual components to be funded through various institutions, and (6) include a priority order for implementing services based on needs and resources available.

Procedures. The information specialist gathered information by reviewing the literature of information and library science, contacting local and national information brokers, and conversing with librarians already operating similar programs. She synthesized this information and developed an outline of proposed procedures and services.

The information specialist organized an advisory committee composed of five library and information specialists (Appendix B). The committee viewed the outlined plan on January 6, 1978. They discussed, amended, and accepted the amended outline of procedures and services.

Outcomes. The final plan proposes a policy of limited selection and suggests an acquisitions procedure. It outlines the organization of materials into four separate categories one of which requires indexing compatible to the ERIC system and computerized handling. Suggested retrieval activities are providing literature searches from all available sources and providing documents for loan from the Information Service and from the I.U. Librairies. Dissemination will initially be limited to answering requests. The proposed order of implementation presented in the plan is: (1) retrieval services, (2) dissemination, (3) organization of materials on hand, (4) selection and acquisition of new materials, (5) expanding dissemination efforts, and (6) broadening cooperation with similar services.

The entire plan is presented in Appendix C.

Objective A.3. The third objective of the Information Service was to catalog and store reports and products currently available, which were produced in or received by the state.

Procedures. The project purchased two four-drawer filing cabinets and six three-foot sections of shelving and collected boxes of materials from the SBVTE office. The staff temporarily shelved materials in alphabetical order by title; the information specialist assessed the extent of the collection and identified types of materials included.

The materials comprised documents which had already been indexed by ERIC or AIM/ARM, Indiana reports, miscellaneous reports not indexed in any other system, miscellaneous journals and newlsetters, indexes to ERIC and AIM/ARM, and ephemeral material. The information specialist analyzed methods of cataloging and recording information about the diverse material.

The information specialist made decisions to handle these varied materials in the following ways:

- Identify ERIC and AIM/ARM documents by their ED and VT numbers and shelve them in this order.
- Catalog and index the remaining report literature using the ERIC Processing Manual and Thesaurus; input the information into a computer using the FAMULUS package program.
- Shelve journals alphabetically by title.
- Establish a vertical file to accomodate ephemeral material such as bibliographies, state plans, tests, and other materials that can be retrieved by subject.

Outcomes. A plan for cataloging and storing materials has been developed, and materials have been processed according to this plan except those reports which need to be cataloged and indexed. The FAMULUS program is ready and cataloging will be completed during the next funding year. Further information about these methods and materials is presented in Appendix C.

Retrieval and dissemination services

Objective A.4. The fourth objective of the Information Service was to offer retrieval and dissemination services within the resource limits of the project for the year.

Procedures. In October 1977 in order to provide services immediately, the information specialist contacted three local information brokers, the Chemical Information Center (C.I.C.), ERIC 'PROBE', and the Indiana Information Retrieval System (INDIRS), to obtain interim services. The information specialist established oral agreements with C.I.C. and 'PROBE' to supply literature searches to the Services and obtained a password to the free INDIRS statistical data base. The Services also negotiated a formal written agreement with the I.U. Libraries to borrow books.

In July 1978, the I.U. Libraries established a new information brokering service called Computer Assisted Reference Service (CARS). The information specialist served on the advisory committee which oversaw the establishment of CARS and in that capacity was able to negotiate an agreement with the I.U. Libraries to be one of the four people trained to search the Lockheed data bases on line. The library also agreed to allow the information specialist to use their computer terminals to search the Lockheed system. The agreed fees were $100 for the training and a $2.00 per search surcharge for using the terminals.

From the first month of the project, therefore, literature search, reference, and book loan services were available. This necessitated a procedure to inform eligible users of these services. In early January, state agency personnel were alerted to the services in the cover letter accompanying the

questionnaire described in objective 1 (see Appendix A). This initial contact was reinforced by visits to the SBVTE office and by presentations to staff meetings at both the State Board and the Division of Vocational Education. In addition, handouts about the services were distributed at the Indiana Vocational Association meeting at Indianapolis in July. Because both time and funds were limited, the informations services were not offered to anyone not on or referred by the staff of a state agency.

Outcomes. During the project year 45 requests for information were received. The mean length of time taken to answer these requests was 6.7 days, the median was 5.5 days, and the mode was 1 day. Specific information about requestors, types of requests, and answers is outlined below.

I. Information requests received (45):

A. Requestor:

1. State agency staff	17
2. ICMC	13
3. Postsecondary faculty	7
4. Graduate assistant	3
5. SBVTE-funded projects	3
6. Out-of-State	2

B. Request communicated by:

1. Telephone	17
2. Personal request	15
3. Letter	13

C. Service requested:

1. Literature searches	34
2. Document(s)	9
3. Reference	5
4. Other	1

II. Responses to information requests:

A. Response communicated by:

1. Letter	28
2. Personal response	12
3. Telephone	6

B. Data bases queried for literature searches:

1. ERIC	26
2. AIM/ARM	12
3. Dissertation Abstracts	3
4. National Technical Information Service (NTIS)	3
5. MEDLERS (National Library of Medicine)	1
6. COMPENDEX (Engineering)	1
7. NICEM (audio-visual)	1
8. I.U. Libraries card catolog	1

C. Sources of literature searches:

1.	ERIC 'PROBE'	13
2.	In-house use of Lockheed . .	11
3.	Chemical Information Center	9
4.	I.U. Medical Center	1
5.	I.U. Libraries card catalog	1

D. Documents provided:

1.	Loan of materials from I.U. Librairies	10
2.	Loan of materials from VEIS collection	8
3.	Paper copy of microfiche original document	7
4.	Photocopy of document . . .	5
5.	Microfiche copy of microfiche original document	1

E. Reference questions answered:

1.	Short citations to a document	5
2.	Referrals	2

F. Unable to fill request:

1.	Document not available . . .	2
2.	Requestor not eligible . .	2

B. Publication and Dissemination Service

Information transformation

Objective B.1. The first objective of the Publication Service was to abstract, synthesize, edit, and disseminate information about selected Indiana research and development efforts through a series of newsletters and report publications. It was the intention of this objective to transform information produced by R&D projects into clear, direct language suited to a wide, general audience of persons interested in vocational education.

Procedures. The editor identified topics of interest for wide dissemination with the help of the state coordinator of R&D programs and members of an editorial board (Appendix B). The primary criteria for all publications were: (1) quality and currency of the information or product and (2) potential impact of information or product on the target audience of state and national vocational educators.

When a product was chosen the editor asked the author to revise it so it would address the appropriate audience in its organization and approach. The primary criteria were that it be: (1) brief and analytic, not long and expository, (2) well written in simple, direct prose for a general, not technical audience, and (3) well organized and sharply focused so as to convey a clarity of purpose and effect.

The editorial board, made up of representative professionals, reviewed the revised manuscripts, rated them, and made recommendations for further improvements on the basis of their: (1) clarity and organization, (2) consistency and accuracy in method and content, (3) appropriateness to the needs of the target audience, (4) reflection on Indiana's priorities and quality standards, and (5) potential significance for national circulation.

The authors responded to these criticisms and recommendations and returned the manuscripts to the editor for final editing, publication, and dissemination.

Outcomes. As a result of this activity, there is: (1) more widespread knowledge and more efficient use of research and development information, (2) improved coordination of state dissemination efforts and a decrease in needless duplication of project activities, and (3) increased visibility and status for research as a means to achieve more effective vocational education programs.

Newsletter: Communique

Objective B.2. The second objective of the Publication Service was to produce four (4) issues of the newsletter *Communique* for a target audience of state teachers, administrators, and guidance directors at all levels.

Procedures. The editor gathered ideas and information that would be suitable for the newsletter, of which the purpose is to report exemplary SBVTE-funded projects and their results. She sought ideas from state staff members who monitor or administer projects and from other interested persons.

Persons involved with the project wrote stories or gave the editor information to do so. She edited it, developed the format, and prepared the copy for publication. Project staff prepared camera-ready copy for the printer.

Communique was disseminated by bulk mail to all persons on the Vocational Education Information Services' mailing list (approximately 4500 persons).

Outcomes. Issues number 16, 17, 18, and 19 of *Communique* spread information to a wide audience of persons interested in vocational education, who thereby had the opportunity to be more informed about research and development projects and products.

Publications: Information Series

Objective B.3. The third objective of the Publication Service was to produce eight (8) reports of high quality Indiana research and development products and disseminate them to a target audience of state and national educators and administrators.

Procedures. The editor chose and transformed the products following the procedures outlined above (objective B.1.). With the approval and/or at the request of the SBVTE staff, the editor gave editorial consultation and services to the three funded projects whose products were designated for

wide dissemination through means *other than the Information Series.* The projects whose products were published with the assistance of the Publication Service under this contract were:

- SBVTE no. 13-76-C-5. *Development of a cost-effectiveness/benefit analysis model and user's manual for postsecondary vocational programs.* Author: Jin Eun Kim. The editor supervised the publication of the postsecondary cost-effectiveness Technical Report, Administrator's Manual, and Final Report.

- SBVTE no. 34-75-C. *Assessment and evaluation of the public's perception of vocational education in Indiana.* Author: Betty A. Sawyers. This became number 3 in the *Information Series.*

- SBVTE no. 33-75-C. *The development of a competency based, multi-occupational curriculum for flexible programming of the transportation cluster.* Author: Bill R. West. This became number 4 in the *Information Series.*

- Development of a position paper describing the state's system of curriculum research for performance based vocational education. This became number 5 in the *Information Series.*

- Development of a book of abstracts of all vocational education research and exemplary projects funded in Indiana in 1976. Editors: Elaine G. Eigeman and Nancy E. Steenhausen. This became number 6 in the *Information Series.*

- SBVTE no. 45-78-III-45. *Development and implementation of a student services demonstration model.* Authors: Dennis Fach, Charles Fields, Delmar Johnson, Marvin Kersey, Lee Miller, and Richard Stith. The editor travelled to New Albany to consult with the writing team and gave editorial assistance on the revision of a manual which described the project.

- Revision and publication of a brochure describing vocational programs in the Indiana Department of Correction. Author: George Wilkins.

Outcomes. A list of these publications and the sources from which they are available can be found in Appendix D.

CHAPTER III

Evaluation, Conclusions, and Recommendations

A. Evaluation

Vocational Education Information Services was evaluated by Dr. Joel H. Magisos of the National Center for Research in Vocational Education on May 26, 1979. Dr. Magisos reviewed the proposals for the 1977-78 and 1978-79 funding years and met with the project staff to discuss (1) the progress made toward completing objectives, (2) the plans developed as the project progressed, (3) the current status of the project, and (4) recommendations for the future.

Dr. Magisos' evaluation reports his observations, conclusions, and recommendations. It supports the decisions made in managing the project and identifies the project's potential to help the SBVTE meet its needs and the needs of vocational educators in Indiana. Dr. Magisos' written evaluation is presented in Appendix E.

B. Conclusions

Both components of Vocational Education Information Services met their objectives.

Objective A.1. The information specialist conducted a needs assessment study and analyzed the results to determine specific user populations and user needs for information and services. See Appendix A for the study results and analysis.

Objective A.2. A flexible, multifunctional plan for organizing and implementing the Information Organization and Retrieval Service was developed. The plan is presented in Appendix C.

Objective A.3. A system for cataloging and storing reports and products produced in or received by the state was developed. This system is now operating.

Objective A.4. Retrieval and dissemination services were offered when the funding year began. The information specialist made arrangements with various Indiana University offices so these services would be available immediately.

Objective B.1. The publications listed in Appendix D were edited to suit a wide, general audience of persons interested in vocational education.

Objective B.2. Issues 16, 17, 18, and 19 of the newsletter *Communique* were published and disseminated during the fiscal year.

Objective B.3. The editor gave editorial consultation and services to three funded projects in the production of five publications designated for wide dissemination. Four reports were edited and published in the *Information Series*. These reports were disseminated to a target audience of state and national administrators. Appendix D lists the nine publications that the editor developed or was instrumental in developing during the funding year.

C. Recommendations

The Information Organization and Retrieval component of Vocational Education Information Services should implement the Information Service as outlined in the plan for development (Appendix C). Implementation should follow the recommendations made as a result of the needs assessment study (Appendix A).

The Publication and Dissemination component should (1) continue to offer editorial consultation at the request of the SBVTE, (2) explore product differentiation as suggested in the Magisos evaluation, (3) form a committee to review and evaluate the format of *Communique* with the possibility of reformatting the newsletter in mind, and (4) produce quality publications for state and national dissemination.

The entire staff of Vocational Education Information Services should work to form a cooperating network with other SBVTE-funded information projects. This effort will allow the various centers to (1) become aware of the other centers' activities, (2) avoid duplication in services and material purchases, and (3)develop continuity for Indiana's information dissemination services.

The staff should also continue to keep current with research in the field of educational dissemination. They should continually review and update their efforts and the direction of the project in view of recent research. This will help Vocational Education Information Services meet its goal of supporting vocational education in Indiana by facilitating more efficient use of information and by developing more effective products for wide dissemination.

FINANCIAL STATEMENT FOR FINAL REPORT ENDING June 30, 1979
(Date)

Project No. 82-77-III-12

ITEMS	Project Budget FY 19--		Total Expenditures on Project		End of Project Balance	
	Agency	Federal	Agency	State/ Federal	Agency	State/ Federal
A. DIRECT EXPENDITURES						
1. Personnel		$30,020		$28,412.27		$1,607.73
2. Contractual services		9,456		8,045.80		1,410.20
3. Employee benefits		5,689		5,091.99		597.01
4. Travel		1,890		2,768.58		-878.58
5. Supplies and materials		5,650		2,583.78		3,066.22
6. Communications (include phone calls, printing)		1,200		1,399.94		-199.94
7. Properties (rentals or purchase of equipment)		2,075		1,983.99		91.01
8. Facilities		-0-		-0-		-0-
9. Product production and dissemination		8,240		11,160.85		-2,920.85
10. Project Evaluation		-0-		-0-		-0-
B. INDIRECT EXPENDITURES 42.2%	$27,100.84		$25,930.72		$1,170.12	
C. TOTAL EXPENDITURES	$27,100.84	$64,220	$25,930.72	$61,447.20	$1,170.12	* $2,772.80

Fiscal Agent/Director: _____

Institution/Agency Name: _____

* Refund this amount to the State Board of Vocational and Technical Education

APPENDICES

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APPENDIX A

INFORMATION USES AND NEEDS OF INDIANA VOCATIONAL EDUCATORS

INFORMATION USES AND NEEDS OF INDIANA VOCATIONAL EDUCATORS

by JoAnn Brooks
Information Specialist

Statement of the Problem

In the field of library and information science the phrases use, user and user needs studies cover a large body of research, the scope of which is broader than the phrases imply. These studies include research on how citations or materials are gathered; how persons find materials in a particular library or center; how information is used after it is found; which group used a certain library, resource or body of knowledge; how often a particular item is cited, a particular question asked, a certain type of information is needed; and what the information needs of a defined group are.

This diverse body of research ranges from a multitude of small surveys to a few large comprehensive studies. Some of the larger studies have been carried out to establish a theoretical framework for information science and the discipline within which the research was done. However, the goal of the majority of the studies was to gather information to plan a new service or to evaluate and improve an old service.

The methods used to research information gathering and use include questionnaire, interview, diary keeping, observation, and even role playing. The most commonly used mehtod has been questionnaire, although Brittain (1970) criticized this method as being inadequate for basic research in information science.

Most of the criticisms leveled at information use studies, like Brittain's, focus on the fact that the research is not applicable to forming theoretical foundations for the field of information science. Inadequate definitions and conceptualizations and ineffective methodology are the areas most often criticized. In addition, the scope of research on information use has become so broad and user groups so diverse, that it is almost impossible to define a user study. The *Annual Review of Information Science and Technology* stopped covering user studies in 1976 because this broadness and diversity did nothing to contribute to the information science field.

Despite the many information use studies already in existence and the criticisms of their lack of contribution to the field of information science, their efficacy in the planning or improvement of individual libraries or information centers has not been questioned. The author was in the beginning stages of developing an information service for Indiana vocational educators and was new to the field of vocational education. She felt the best way to determine appropriate user services and populations for the new service was to survey the information uses and needs of a sample of potential service clients.

In addition, a major study done by Line (1971) at Bath University Library found that there are many types of educators and that they have very different information needs. Teacher educators, educational researchers, administrators, and secondary classroom teachers were all potential users of the service. The author wanted to survey an Indiana sample of all those groups to assess their current information gathering habits, level of familiarity with sources, and their opinions about proposed services.

Finally, Magisos (1971) at the Center for Vocational and Technical Education in Ohio did a study of information user needs for vocational-technical education. That study was eight years old and those eight years encompassed a period of great growth and change in the field of information transfer as well as a period of rearranged priorities in vocational education. The author believed it would be useful to do a similar study with Indiana vocational educators to see if changes in the information and vocational education fields had effected changes in information use.

The study was, therefore, undertaken to define the potential service user needs and population by looking at current information use. Based on the findings of the INFROSS study (Bath University of Technology, 1971) it was hypothesized that vocational educators who were involved with state-funded projects would be the most knowledgeable information users since they would need to apply for funding, write results, and prepare final reports.

A questionnaire survey was undertaken, using three distinct sample groups. These groups were state agency personnel, vocational educators who had received funding from the Indiana State Board of Vocational and Technical Education (SBVTE) Supportive Services and Program Improvement monies, and a random sample of secondary and postsecondary vocational educators. The major finding was that state agency personnel, not funded researchers, are most knowledgeable users of information.

Methods

Data were collected through questionnaires mailed to a total of 235 Indiana vocational educators in the winter and spring of 1978. A total of 152, or 64.6 percent, of the questionnaires, were returned.

The subjects comprised three groups of vocational education personnel; the 42 persons employed by relevant Indiana state agencies as identified by the Vocational Education Information Services mailing list and hereafter called state staffs; 93 persons identified by the SBVTE records as having received Supportive Services and Program Improvement monies (PL 90-576, parts C or D money) in 1976 or 1977 and hereafter called researchers; and 100 persons selected by choosing every nineteenth name from the Vocational Education Information Services mailing list of secondary and postsecondary vocational educators and hereafter called controls. Questionnaires were mailed to state staffs in early January 1978 and to researchers and controls in April 1978.

The author used the questionnaire developed by Magisos (1971) and Brittain's (1970) description of phases of information use in doing research to develop two three-part questionnaires. Parts one and three were identical for both questionnaires. Part two of both questionnaires requested the same information but for the research group the set of questions asked if a specific type of information

had been needed for the funded project and for the control group the questions asked in general terms if the specific type of information had been needed in the past year. The control questionnaire was tested on a graduate class in vocational administration at Indiana University-Purdue University Indianapolis. As a result of the students' comments, some questions were deleted, one was added, and wording was clarified in several questions. The research questionnaire was not pretested, although some changes were made as a result of the comments on the control questionnaire.

Cover letters accompanied the questionnaires. Each of the three groups received a different cover letter asking them to complete the questionnaire. The state staffs received a letter signed by the author which outlined the projected information service, asked them for input, and offered immediate literature search and loan services to them. The research group received a letter signed by the Director of the SBVTE which explained that they had been chosen to receive a questionnaire because they had received funding from the SBVTE. The control group also received a letter signed by the state director but which attributed their inclusion to random chance. All letters stressed the importance of the new information service and of the subjects' contributions to it. Sample questionnaires and cover letters are appended to this report.

Findings

The data collected from the survey were analyzed using the Statistical Package for the Social Sciences (SPSS) program at the Indiana University Wrubel Computing Center and the SPSS manual (1975). Since the intent of the study was to determine the information use of potential information service users, no sophisticated correlations were attempted. The findings presented below, for the most part, are simple frequencies for each group studied and total frequencies. When there were obvious differences between groups based on demographic information such as age, sex, education, this information is also included. Complete demographic information for the total sample and subgroups is presented in Table 1.

Familiarity with Sources and Formats of Information

Subjects were asked whether they had used or were familiar with several standard library indexes commonly used as information sources. The subjects' degree of familiarity with these indexes varied (Table 2)

The state staffs sample was the most familiar with these indexes: 92.3% were familiar with *Readers Guide* and *Education Index*, 88.5% were familiar with *Resources in Vocational Education* (RIVE), 80.8% were familiar with *Current Index to Journals in Education* (CIJE), and 76.9% were familiar with the remaining indexes. Of the controls, 39.7% knew about CIJE, 44.4% knew about *Resources in Education* (RIE), and 50.8% knew about RIVE. The controls were most familiar with *Readers Guide*, with 85.7% being familiar with it. The researchers were less familiar with all but *Dissertation Abstracts* than the state staffs, but more familiar than the controls. The researchers' familiarity with the ERIC products was 82.5% familiar with RIVE, 74.6% familiar with RIE, and 65.1% familiar with CIJE.

TABLE 1: DEMOGRAPHIC INFORMATION ABOUT THE NEEDS SURVEY SAMPLE

	Total sample (%)	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
		General demographic information		
Sex:				
male	66.9	65.4	91.9	42.9
female	33.1	34.6	8.1	57.1
Age:				
29 or less	19.2	7.7	12.9	30.2
30-39	31.8	61.5	32.3	19.0
40-49	27.8	23.1	30.6	27.0
50-59	19.2	7.7	22.6	20.6
60 or more	2.0	---	1.6	3.2
Highest degree earned:				
high school	2.6	---	---	6.3
two year	.7	---	---	1.6
bachelor's	19.2	7.7	8.1	34.9
master's	53.6	61.5	56.5	47.6
specialist	6.6	15.4	6.5	3.2
doctorate	17.2	15.4	29.0	6.3
Primary (p) and secondary (s) responsibilities:[a]				
	p/s	*p/s*	*p/s*	*p/s*
administration	42.1/13.0	92.0/12.5	47.6/14.8	15.9/10.5
research	3.3/29.6	----/37.5	7.9/44.4	----/ 5.3
teaching	44.7/13.0	----/25.0	30.2/ 7.4	77.8/15.8
counseling	3.9/31.5	----/----	6.3/29.6	3.2/47.4
other	5.9/13.0	7.7/25.0	7.9/ 3.7	3.2/21.1
Vocational areas:				
all vocational areas	28.9	38.5	42.9	11.1
agriculture	10.5	11.5	7.9	12.7
business	9.2	7.7	4.8	14.3
distributive education	4.6	7.7	6.3	1.6
health occupations	4.6	---	1.6	9.5
home economics	13.8	11.5	---	28.6
industrial	1.3	3.8	1.6	---
technical	.7	---	---	1.6
trade and industry	7.9	7.7	12.0	3.2
other	18.4	11.5	22.2	17.5

	Total sample (%)	State staff sample (%)	Researcher sample (%)	Control sample (%)
Educational level of institution where employed:				
secondary	46.1	3.8	44.4	65.1
postsecondary	14.5	3.8	17.5	15.9
college/university	19.1	---	34.9	11.1
other	30.9	96.2	15.9	19.0
Factors that might influence information				
Degrees currently being earned:[b]				
bachelor's	2.6	0.0	0.0	6.3
certificate	.9	0.0	2.1	0.0
master's	12.9	5.0	6.3	22.9
specialist	7.8	15.0	12.5	0.0
doctorate	6.0	10.0	10.4	0.0
Total working	30.2	30.0	31.3	29.2
Total not working	69.8	70.0	68.8	70.8
Institution granting highest degree:[c]				
n/a	2.6	---	---	6.3
IU/Bloomington	28.1	36.4	27.3	25.0
Purdue	16.7	22.7	15.9	14.6
ISU	15.8	18.2	13.6	16.7
BSU	14.0	13.6	13.6	14.6
IU/Regional campus	.9	---	---	2.1
other state univ.	15.8	4.5	25.0	12.5
other college	6.1	4.5	4.5	8.3
Involvement with special groups:				
culturally disadvantaged	53.3	61.5	68.3	34.9
econ. disadvantaged	60.5	61.5	76.2	44.4
learning disabled	38.2	50.0	42.9	28.6
mentally disabled	21.1	46.2	19.0	12.7
physically handicapped	35.5	58.8	44.4	19.0
other special groups	5.3	11.5	6.3	1.6
no special groups	23.0	30.8	15.9	27.0
Methods by which persons gathered information				
Number of professional meetings attended in a year:				
0	4.0	---	1.6	7.9
1	7.3	---	3.2	14.3
2	13.2	---	14.5	17.5
3	10.6	3.8	14.5	9.5
4	12.6	3.8	14.5	14.3
5 or more	52.3	92.3	51.6	36.5

	Total sample (%)	State staff sample (%)	Researcher sample (%)	Control sample (%)
Visits to other institutions:				
yes	72.8	96.2	85.5	50.8
no	27.2	3.8	14.5	49.2
Number of journals regularly read:				
0	7.2	---	6.3	11.1
1	20.4	3.8	17.5	30.2
2	17.8	19.2	12.7	22.2
3	15.1	23.1	14.3	12.7
4	8.6	3.8	12.7	6.3
5	10.5	15.4	9.5	9.5
6	9.2	11.5	12.7	4.8
7-23	11.4	22.9	12.7	3.2
Type of service/center used to gather information:				
libraries:				
secondary school	39.5	11.5	31.7	58.7
postsecondary school	21.1	15.4	25.4	19.0
college or university	54.6	53.8	65.1	44.4
public	35.5	38.5	38.1	31.7
state	14.5	57.7	9.5	1.6
interlibrary loan	13.8	9.5	19.0	11.1
other library	17.1	19.2	23.8	9.5
state education agency	55.9	84.6	66.7	33.3
audiovisual center	53.9	19.2	58.7	63.5
Indiana Curriculum Materials Center	56.6	88.5	65.1	34.9

Note: In categories where the columns do not add up to 100%, individuals answered more than one time.

[a]Of those whose primary responsibility is administration, 20.3% are female and 79.7% are male.

[b]Of those working on advanced degrees, 20% (6) are female and 80% (29) are male.

[c]The higher percentage of IUB graduates may be because the questionnaires originated from the Bloomington campus; IUB graduates might be more likely to respond.

As might be expected, the respondents with higher degrees were more likely to be familiar with the indexes. The only differences between age groups and sexes was familiarity with RIVE. 78.2% of the men were familiar with RIVE while only 54% of the women knew of it.

TABLE 2: FAMILIARITY WITH INDEXES

Indexes	*Familiar (%)*	*Unfamiliar (%)*
Readers Guide	88.8	11.2
Education Index	79.6	20.4
Dissertation Abstracts	71.1	28.9
Resources in Vocational Education (RIVE, *formerly AIM/ARM)*	70.4	29.6
Psychological Abstracts	63.8	36.2
Resources in Education (RIE)	62.5	37.5
Current Index to Journals in Education (CIJE)	57.2	42.8

Magisos (1971) found that only 43.1% of his national sample were familiar with ERIC. Magisos did not specify whether he meant the entire ERIC system or RIE and CIJE, but if we compare the Indiana sample s familiarity with those two indexes to the Magisos sample, the Indiana sample shows considerable gain (Table 3).

TABLE 3: FAMILIARITY WITH ERIC

Samples	*Familiar (%)*	*Unfamiliar (%)*
Magisos sample: N=3,182		
total	43.1	55.7
teachers	21.7	76.9
counselors	32.3	74.7
administrators	57.2	41.1
local directors	65.3	34.7
supervisors	59.6	38.5
teacher educators	53.5	43.9
researchers	95.0	5.0

continued on next page

TABLE 3 *continued*

Indiana sample: N=152

total*	62.5/57.2	37.5/42.8
teachers	48.6/44.1	51.5/55.9
counselors	83.3/50.0	16.7/50.0
administrators	73.4/71.9	26.6/28.1
others	55.5/55.5	44.4/44.4
researchers	100.0/60.0	0.0/40.1

*First number is RIE, second number is CIJE.

Though Indiana vocational educators use ERIC more than Magisos' sample, there are many educators who are unfamiliar with this excellent source of information. In addition, the ERIC system was only seven years old when Magisos' study was conducted. No doubt, in the light of the number of years since Magisos' study, a national sample would illustrate a gain in the level of familiarity with ERIC comparable to that of the Indiana sample.

The respondents to the Indiana survey were asked if they had used or were familiar with computer searches of any of the indexes. Table 4 shows the responses.

TABLE 4: FAMILIARITY WITH COMPUTER SEARCHES

Familiarity	*ERIC (RIE/CIJE) (%)*	*AIM/ARM (%)*	*Dissertation Abstracts (%)*	*Psychological Abstracts (%)*	*Sociological Abstracts (%)*
Used:					
total sample	*30.3*	*19.1*	*3.3*	*3.9*	*1.3*
state staffs	46.2	38.5	7.7	3.8	3.8
researchers	44.4	28.6	4.8	6.3	0.0
controls	9.5	1.6	0.0	1.6	1.6
Familiar Not Used:					
total sample	*40.1*	*44.1*	*42.1*	*50.0*	*49.3*
state staffs	42.3	50.0	57.7	57.7	57.7
researchers	42.9	54.0	47.6	60.3	60.3
controls	36.5	31.7	30.2	36.5	34.9
Unfamiliar					
total sample	*29.6*	*36.8*	*54.6*	*46.1*	*49.3*
state staffs	11.5	11.5	34.6	38.5	38.5
researchers	12.7	17.5	47.6	33.3	39.7
controls	54.0	66.7	69.8	61.9	63.5

Of the total sample of 152, 90 respondents had never used a computer search of any data base. The 62 who had used such a search comprised 16 (25.4%) state staffs, 37 (58.7%) researchers, and 10 (15.9%) controls. When asked their reactions to the results of their computer searches, 36 (57.1%) were satisfied, 5 (7.9%) were dissatisfied, and 21 (33.3%) were uncertain about their search results.

Computer searches of ERIC (45) and of AIM/ARM (29) were the most common. Male respondents were more likely to have used these searches than females. For ERIC searches, 80% of those who had used them were males. For AIM/ARM, the male to female ratio was 82.8%:17.2%. As with use of indexes, the higher the earned degree, the more likely a respondent would have used a computer search. Those who listed administration as their primary responsibility were most likely to have used a computer search of ERIC (43.8%) or AIM/ARM (28.1%). This was followed by research as a primary responsibility, with 40% having used ERIC and 16.7% having used AIM/ARM. Teachers in this category having used ERIC were 17.6% and 11.8% for AIM/ARM.

Since many documents are available only in microfilm or microfiche, the respondents were queried as to their familiarity with these media and the local availability of hardware to read them. Table 5 shows the total sample response to these questions.

TABLE 5: FAMILIARITY WITH MICROFORMS AND AVAILABILITY OF MICROFORM EQUIPMENT

Familiarity and Availability	*Yes (%)*	*No (%)*	*Do Not Know (%)*
Used microfilm:			
total sample	65.5	32.5	0.0
state staffs	84.0	16.0	0.0
researchers	79.4	20.6	0.0
controls	49.2	50.8	0.0
Used microfiche:			
total sample	57.0	40.4	2.6
state staffs	84.0	16.0	0.0
researchers	73.0	27.0	0.0
controls	30.2	63.5	6.3
Access to microfilm reader:			
total sample	44.0	47.7	7.9
state staffs	52.0	40.0	8.0
researchers	49.2	47.6	3.2
controls	36.5	50.8	12.7

continued on next page

TABLE 5 *continued*

Access to microfiche reader:			
total sample	*37.7*	*51.4*	*11.0*
state staffs	62.5	29.2	8.3
researchers	49.2	47.6	3.2
controls	15.3	64.4	20.3
Access to reader-printer:			
total sample	*22.1*	*59.7*	*18.1*
state staffs	20.0	40.0	40.0
researchers	33,3	58.7	7.9
controls	11.5	68.9	19.7

Types and Sources of Information Used

The second part of the questionnaire asked the respondents to indicate which sources they would choose or had chosen to find ten distinct kinds of information. The state staff and control samples were asked if they had needed to find similar kinds of information in the past year. The researcher sample was asked whether the researcher, an employee, or a group of people had searched for similar kinds of information when considering, writing the proposal or final report, or implementing the SBVTE-funded project.

The ten kinds of information included in the questionnaire are listed and explained below. Respondents first and second choices for sources for each kind of information are shown in Table 6 through Table 15.

1. Innovative practices and procedures.

88.5% of the state staffs and 67.7% of the controls reported that they had needed information on innovative practices and procedures when they were developing a new project or class. Of the researchers, 75.4% had looked for information on innovative practices themselves. 13.1% of the researchers assigned the searching to an employee, and 11.5% had a group looking for the information.

The two most common first sources for the total sample were personal contact with local colleagues followed by personal contact with state vocational education agencies. The order of two first sources chosen was reversed for the researcher sample. The first and second choices for sources of information on innovative practices and procedures are shown for the total sample and subgroups in Table 6.

TABLE 6: SOURCES CHOSEN TO FIND INNOVATIVE PROCEDURES

Sources	*Total sample* (%)	*State staff sample* (%)	*Researcher sample* (%)	*Control sample* (%)
First choice:	*n=136*	*n=23*	*n=55*	*n=58*
local colleague	39.0	43.5	25.5	50.0
nonlocal colleague	11.0	---	18.2	8.6
local librarian	---	---	---	---
nonlocal librarian	1.5	4.3	---	1.7
state agency	27.2	39.1	27.3	22.4
business	5.1	---	5.5	6.9
personal library	9.6	4.3	14.5	6.9
local library	1.5	4.3	---	1.7
information service	2.9	4.3	5.5	---
other source	2.2	---	3.6	1.7
Second choice:	*n=119*	*n=20*	*n=47*	*n=52*
local colleague	14.3	5.0	23.4	9.6
nonlocal colleague	24.4	25.0	17.0	30.8
local librarian	5.9	---	2.1	11.5
nonlocal librarian	1.7	---	2.1	1.9
state agency	26.1	40.0	34.0	13.5
business	5.9	5.0	2.1	9.6
personal library	13.4	10.0	10.6	17.3
local library	2.5	5.0	---	3.8
information service	3.4	5.0	4.3	1.9
other source	2.5	5.0	4.3	---

2. Grant funds.

When asked if they had needed information on possible sources of outside funding for special projects, 68% of the state staffs and 20% of the controls replied that they needed this kind of information in the past year. 85.5% of the researchers had sought this information themselves, 6.5% had assigned an employee to find it, and 8.1% indicated that a group looked for possible funding sources.

A personal contact at a state vocational education agency was the most frequent first choice as a source for grant funds information. The first and second choices for sources of information on possible outside funding are shown for the total sample and subgroups in Table 7.

TABLE 7: SOURCES CHOSEN TO FIND GRANT FUNDS

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=137*	*n=23*	*n=59*	*n=55*
local colleague	26.3	17.4	22.0	34.5
nonlocal colleague	5.8	---	11.9	1.8
local librarian	1.5	---	---	3.6
nonlocal librarian	.7	---	---	1.8
state agency	56.9	65.2	59.3	50.9
business	---	---	---	---
personal library	2.9	---	3.4	3.6
local library	2.2	8.7	---	1.8
information service	.7	4.3	---	---
other source	2.9	4.3	3.4	1.8
Second choice:	*n=93*	*n=15*	*n=28*	*n=50*
local colleague	19.4	13.3	32.1	14.1
nonlocal colleague	15.1	6.7	21.4	14.0
local librarian	8.6	6.7	---	14.0
nonlocal librarian	6.5	20.0	7.1	2.0
state agency	22.6	26.7	25.0	20.0
business	14.0	6.7	3.6	22.0
personal library	3.2	6.7	3.6	2.0
local library	4.3	---	---	8.0
information service	1.1	6.7	---	---
other source	5.4	6.7	7.1	4.0

3. Selected references.

91.7% of the state staffs and 70.5% of the controls reported needing a few bibliographic references to important documents on a specific subject. Of the researchers, 70% searched for the references, 18.3% had employees search, and in 11.1% of the cases a group of people searched.

The total sample most commonly chose personal contact with a local librarian or information specialist as the first source for selected references. However, when the subgroup responses are examined all three groups had different first choices. State staffs went first to the material in the local library or information center, researchers went first to their personal collection of information materials, and controls went first to the local librarian or information specialist. The first and second choices for finding selected references are shown for the total sample and subgroups in Table 8.

TABLE 8: SOURCES CHOSEN TO FIND SELECTED REFERENCES

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=131*	*n=22*	*n=54*	*n=55*
local colleague	7.6	---	13.0	5.5
nonlocal colleague	4.6	---	11.1	---
local librarian	37.4	31.8	11.1	65.5
nonlocal librarian	3.1	---	3.7	3.6
state agency	6.1	9.1	11.1	---
business	.8	---	1.9	---
personal library	18.3	9.1	37.0	3.6
local library	16.8	40.9	1.9	21.8
information service	5.3	9.1	9.3	---
other source	---	---	---	---
Second choice:	*n=114*	*n=20*	*n=48*	*n=46*
local colleague	9.6	5.0	12.5	8.7
nonlocal colleague	5.3	5.0	10.4	---
local librarian	11.4	30.0	6.3	8.7
nonlocal librarian	11.4	10.0	4.2	19.6
state agency	14.0	15.0	16.7	10.9
business	4.4	10.0	6.3	---
personal library	14.0	10.0	18.8	10.9
local library	20.2	10.0	16.7	28.3
information service	7.0	5.0	4.2	10.9
other source	2.6	---	4.2	2.2

4. Document copies:

86.4% of the state staffs and 72.9% of the controls reported needing to find a copy of the book, journal, or other document which had been cited in a bibliographic reference. When researchers needed a document, 63.8% looked themselves, 20.7% had an employee look, and it was a group effort in 15.5% of the cases.

The first choice of a source to find a document follows the same pattern as choices of sources for selected references. The total sample most often selected personal contact with a local librarian or information specialist, but the state staffs went most often to materials in their personal collection, and only controls went most often to the local librarian. Table 9 shows the first and second choices for finding a copy of a specific document for the total sample and subgroups.

TABLE 9: SOURCES CHOSEN TO FIND COPIES OF DOCUMENTS

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=131*	*n=22*	*n=53*	*n=56*
local colleague	6.1	---	13.2	1.8
nonlocal colleague	4.6	---	9.4	1.8
local librarian	35.9	31.8	17.0	55.4
nonlocal librarian	1.5	---	1.9	1.8
state agency	7.6	13.6	9.4	3.6
business	2.3	4.5	3.8	---
personal library	13.7	4.5	22.6	8.9
local library	23.7	45.5	11.3	26.8
information service	1.5	---	3.8	---
other source	3.1	---	7.5	---
Second choice:	*n=115*	*n=19*	*n=47*	*n=49*
local colleague	11.3	10.5	14.9	8.2
nonlocal colleague	3.5	---	8.5	---
local librarian	15.7	26.3	4.3	22.4
nonlocal librarian	13.9	10.5	10.6	18.4
state agency	5.2	10.5	6.4	2.0
business	1.7	5.3	---	2.0
personal library	13.0	5.3	21.3	8.2
local library	29.6	21.1	27.7	34.7
information service	3.5	10.5	2.1	2.0
other source	2.6	---	4.3	2.0

5. Numerical data.

88.5% of the state staffs reported needing to find specific demographic, educational, vital, and other statistical data which had been collected by the government, research projects, etc., but only 25.8% of the controls had needed such information in the preceding year. When the researchers needed numerical data, 67.8% searched themselves, 10.2% had an employee search, and in 22% of the cases a group searched.

The most common first source for the total sample was personal contact with a state vocational education agency. Both state staffs and controls reflected the choices of the total sample. Researchers, however, went to a local colleague (33.3%) as a first choice, followed closely by a state agency (29.8%). Table 10 shows the first and second choices for sources of numerical data for the total sample and subgroups.

TABLE 10: SOURCES CHOSEN TO FIND NUMERICAL DATA

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=142*	*n=25*	*n=57*	*n=60*
local colleague	19.7	4.0	33.3	13.3
nonlocal colleague	4.2	---	10.5	---
local librarian	4.2	4.0	1.8	6.7
nonlocal librarian	---	---	---	---
state agency	54.9	84.0	29.8	66.7
business	.7	---	1.8	---
personal library	9.2	4.0	14.0	6.7
local library	2.1	---	3.5	1.7
information service	3.5	4.0	1.8	5.0
other source	1.4	---	3.5	---
Second choice:	*n=96*	*n=13*	*n=35*	*n=48*
local colleague	10.4	15.4	11.4	8.3
nonlocal colleague	7.3	7.7	8.6	6.3
local librarian	10.4	---	5.7	16.7
nonlocal librarian	3.1	---	---	6.3
state agency	24.0	15.4	31.4	20.8
business	3.1	7.7	2.9	2.1
personal library	13.5	30.8	20.0	4.2
local library	10.4	---	---	20.8
information service	9.4	7.7	2.9	14.6
other source	8.3	15.4	17.1	---

6. Answers to specific questions.

Almost all, 95.5%, of the state staffs but only about half, 48.3%, of the controls needed a specific item of information like a date, a name, or an address. When researchers needed answers to specific questions, 73.2% of them looked for the answer themselves. In 19.6% of the cases researchers had an employee search for the answers, and in 7.1% of the cases a group searched.

The most common first choice for short answers for the total sample was personal contact with local colleague (22.8%), followed closely by personal contact with a state vocational education agency (21.3%). Researchers chose local colleagues and state agencies equally often as a first choice for answers to specific questions. However, state staffs strongly favored state agencies as a first choice for short answers, and controls chose personal contact with a local colleague and personal contact with a librarian or information specialist as their first source for this type of information. Table 11 shows the first and second choices for sources of answers to specific questions for the total sample and subgroups.

TABLE 11: SOURCES CHOSEN TO FIND ANSWERS TO SPECIFIC QUESTIONS

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=136*	*n=24*	*n=53*	*n=59*
local colleague	22.8	12.5	22.6	27.1
nonlocal colleague	2.2	---	3.8	1.7
local librarian	18.4	16.7	9.4	27.1
nonlocal librarian	2.9	---	5.7	1.7
state agency	21.3	41.7	22.6	11.9
business	4.4	---	9.4	1.7
personal library	13.2	8.3	18.9	10.2
local library	12.5	20.8	7.5	13.6
information service	1.5	---	---	3.4
other source	.7	---	---	1.7
Second choice:	*n=108*	*n=15*	*n=41*	*n=52*
local colleague	13.0	26.7	17.1	5.8
nonlocal colleague	12.0	6.7	17.1	9.6
local librarian	16.7	13.3	4.9	26.9
nonlocal librarian	6.5	---	4.9	9.6
state agency	17.6	6.7	19.5	19.2
business	1.9	---	2.4	1.9
personal library	13.0	20.0	19.5	5.8
local library	13.0	13.3	12.2	13.5
information service	4.6	6.7	2.4	5.8
other source	1.9	6.7	---	1.9

7. Research/evaluation methodology.

76.9% of state staffs and 45% of controls reported needing information on specific research or evaluation methods. When researchers needed methodologies, 71.1% searched themselves, 10% had an employee search, and 18.3% had a group search.

The most common first source of information on appropriate research methodologies for the total sample was personal contact with a state vocational education agency. The state agency was the first choice for state staffs and controls but researchers most often went to local colleagues for this type of information. Table 12 shows the most common first and second choices for sources of information on research or evaluation methods for the total sample and subgroups.

TABLE 12: SOURCES CHOSEN TO FIND RESEARCH METHODOLOGY

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=135*	*n=23*	*n=55*	*n=57*
local colleague	22.2	13.0	29.1	19.3
nonlocal colleague	7.4	---	10.9	7.0
local librarian	5.2	4.3	1.8	8.8
nonlocal librarian	1.5	---	---	3.5
state agency	25.9	56.5	18.2	21.1
business	3.0	---	3.6	3.5
personal library	17.8	4.3	23.6	17.5
local library	8.1	8.7	3.6	12.3
information service	5.9	13.0	3.6	5.3
other source	3.0	---	5.5	1.8
Second choice:	*n=117*	*n=20*	*n=45*	*n=52*
local colleague	12.8	25.0	15.6	5.8
nonlocal colleague	11.1	10.0	13.3	9.6
local librarian	13.7	10.0	4.4	23.1
nonlocal librarian	4.3	15.0	---	3.8
state agency	28.2	---	33.3	34.6
business	3.4	5.0	4.4	1.9
personal library	11.1	15.0	15.6	5.8
local library	8.5	10.0	8.9	7.7
information service	5.1	5.0	2.2	7.7
other source	1.7	5.0	2.2	---

8. Statistical methods.

Only 40.9% of state staffs and 36.4% of controls reported needing information on how to statistically analyze data. 76.4% of the researchers reported searching for statistical techniques themselves, 14.5% assigned the task to an employee, and 9.1% reported that a group looked for the information.

The total sample most often chose personal contact with a local colleague as their first source for information on statistical methods. However, the separate subgroups did not choose first sources in the same way as the total group or as each other. The state staffs split their first choice equally (23.8%) between personal contact with a local colleague and a computerized information service. Controls most commonly chose materials in the local library as their first source for statistical methods. Researchers most often chose materials in their personal collection as their first source. First and second choices for sources of information on statistical methods for the total sample and subgroups are presented in Table 13.

TABLE 13: SOURCES CHOSEN TO FIND STATISTICAL METHODS

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=127*	*n=21*	*n=52*	*n=54*
local colleague	23.6	23.8	28.8	18.5
nonlocal colleague	7.9	14.3	9.6	3.7
local librarian	5.5	---	3.8	9.3
nonlocal librarian	2.4	4.8	1.9	1.9
state agency	10.2	9.5	5.8	14.8
business	.8	---	---	1.9
personal library	18.9	4.8	30.8	13.0
local library	12.6	9.5	3.8	22.2
information service	11.8	23.8	3.8	14.8
other source	6.3	9.5	9.6	1.9
Second choice:	*n=99*	*n=16*	*n=33*	*n=50*
local colleague	15.2	37.5	15.2	8.0
nonlocal colleague	11.1	6.3	12.1	12.0
local librarian	9.1	12.5	3.0	12.0
nonlocal librarian	9.1	6.3	6.1	12.0
state agency	18.2	12.5	24.2	16.0
business	8.1	6.3	9.1	8.0
personal library	10.1	6.3	15.2	8.0
local library	8.1	12.5	3.0	10.0
information service	9.1	---	12.1	10.0
other source	2.0	---	---	4.0

9. Materials development.

75% of state staffs and 51.7% of controls reported needing information to help them develop materials such as curricula, tests, research instruments, or audio-visual aids. When researchers needed this type of information, only 56% searched themselves. 22.4% assigned the task to employees, and in 20.7% of the cases, a group searched.

The first choice to find information on materials development for the total sample was very close between personal contact with a local colleague (24.6%) and materials in a personal collection (23.2%). Researchers compared most closely to the total sample with 28.1% choosing a local colleague as first source and 22.8% choosing their personal library. Controls switched the order with 27.6% choosing their personal library and 24.1% choosing a local colleague as first choice. State staffs, however, differed from the rest of the sample. They most often (34.8%) chose personal contact with a state vocational education agency (which could be translated to contact with a local colleague) for information on developing new materials. Table 14 presents the first and second choices for the total sample and subgroups for information on materials development.

TABLE 14: SOURCES FOR MATERIALS DEVELOPMENT

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=138*	*n=23*	*n=57*	*n=58*
local colleague	24.6	17.4	28.1	24.1
nonlocal colleague	5.1	4.3	10.5	---
local librarian	5.8	4.3	3.5	8.6
nonlocal librarian	2.9	---	3.5	3.4
state agency	17.4	34.8	12.3	15.5
business	2.9	---	1.8	5.2
personal library	23.2	13.0	22.8	27.6
local library	10.1	17.4	5.3	12.1
information service	2.9	8.7	3.5	---
other source	5.1	---	8.8	3.4
Second choice:	*n=115*	*n=18*	*n=44*	*n=53*
local colleague	17.4	27.8	18.2	13.2
nonlocal colleague	15.7	5.6	22.7	13.2
local librarian	8.7	5.6	6.8	11.3
nonlocal librarian	5.2	5.6	4.5	5.7
state agency	16.5	16.7	13.6	18.9
business	6.1	---	4.5	9.4
personal library	12.2	11.1	18.2	7.5
local library	13.9	16.7	6.8	18.9
information service	1.7	11.1	---	---
other source	2.6	---	4.5	1.9

10. Literature search.

Only 36.4% of state staffs and 19.6% of controls reported needing a complete search of the literature on a specific topic. When they needed a literature search, 58.2% of the researchers did it themselves, 20% had an employee search, and 21.8% had a group involved in the search.

The most common first choice for a literature search for the total sample was a computerized information service. State staffs and researchers chose an information service as their first sources but controls split their first choice (23.6% each) between an information service and personal contact with a state vocational education agency. Table 15 presents first and second choices for sources of a literature search for the total sample and subgroups.

TABLE 15: SOURCES FOR LITERATURE SEARCHES

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
First choice:	*n=128*	*n=22*	*n=51*	*n=55*
local colleague	6.3	13.6	5.9	3.6
nonlocal colleague	4.7	---	9.8	1.8
local librarian	14.8	9.1	9.8	21.8
nonlocal librarian	6.3	18.2	---	7.3
state agency	18.8	18.2	13.7	23.6
business	.8	---	2.0	---
personal library	8.6	---	15.7	5.5
local library	9.4	---	13.7	9.1
information service	27.3	40.9	25.5	23.6
other source	3.1	---	3.9	3.6
Second choice:	*n=101*	*n=17*	*n=39*	*n=45*
local colleague	6.9	---	12.8	4.4
nonlocal colleague	4.0	5.9	2.6	4.4
local librarian	9.9	5.9	2.6	17.8
nonlocal librarian	10.9	5.9	12.8	11.1
state agency	21.8	29.4	17.9	22.2
business	4.0	---	7.7	2.2
personal library	11.9	---	23.1	6.7
local library	16.8	23.5	5.1	24.4
information service	11.9	29.4	10.3	6.7
other source	2.0	---	5.1	---

The final question on sources of information asked respondents to indicate all sources they had used in the past year. Responses to this question are shown in Table 16 for the total sample and subgroups. Respondents were asked to indicate those sources they considered least helpful. Responses to these questions are presented in Table 17.

TABLE 16: SOURCES USED TO FIND INFORMATION

	Total sample (%)	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
Sources				
local colleague	90.7	92.3	85.7	95.1
nonlocal colleague	78.7	88.5	82.5	70.5
local librarian	66.0	73.1	54.0	75.4
nonlocal librarian	45.3	53.8	38.1	49.2
state agency	84.0	92.3	90.5	73.8
business	63.3	76.9	52.4	68.9
personal library	86.0	88.5	88.9	82.0
local library	70.7	84.6	61.9	73.8
information service	44.7	65.4	54.0	26.2
other source	10.8	18.5	18.0	4.9

TABLE 17: SOURCES--MOST USEFUL AND LEAST USEFUL*

Sources	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
Most useful:	*n=150*	*n=26*	*n=63*	*n=61*
local colleague	29.3	19.2	27.0	36.1
nonlocal colleague	10.7	3.8	17.5	6.6
local librarian	8.0	7.7	3.2	13.1
nonlocal librarian	5.3	11.5	3.2	4.9
state agency	25.3	46.2	27.0	14.8
business	18.0	19.2	15.9	19.7
personal library	26.0	26.9	27.0	24.6
local library	8.7	11.5	4.8	11.5
information service	6.0	11.5	6.3	3.3
other source	6.1	3.8	8.2	4.9

continued on next page

TABLE 17 *continued*

Least useful:	*n=150*	*n=26*	*n=63*	*n=61*
local colleague	7.3	11.5	7.9	4.9
nonlocal colleague	8.7	19.2	6.3	6.6
local librarian	12.7	7.7	15.9	11.5
nonlocal librarian	12.7	3.8	17.5	11.5
state agency	6.7	3.8	4.8	9.8
business	14.0	19.2	14.3	11.5
personal library	7.3	3.8	9.5	6.6
local library	20.0	26.9	20.6	16.4
information service	16.7	15.4	20.6	13.1
other source	2.0	3.8	3.3	---

*Percentages total more than 100% because some respondents chose more than one of each.

Perceived Information Needs and Access to Sources

The final part of the questionnaire asked respondents to rank their information needs, their opinions on various kinds of information services, and their preference for types and turn-around-time of services.

The four basic information needs were: (1) specific facts or reference information needed on a one-time basis, (2) numerical data such as student enrollment data, (3) descriptive information such as program descriptions, curricula, or basic texts, and (4) research information such as previous results, statistical techniques, or instrument design. Respondents were asked to rank their needs for each type with a one (1) indicating most frequently needed and a four (4) indicating least frequently needed. Using the arithmetic mean for the total sample, the most frequently needed information was descriptive (mean=1.7), followed by numerical data (mean=2.4), research information (mean=2.8), and specific facts (mean=3.0). Table 18 presents the mean responses of the total sample and subgroups.

TABLE 18: FOUR TYPES OF INFORMATION RANKED BY FREQUENCY OF NEED

Information type	*Total sample mean*	*State staff sample mean*	*Researcher sample mean*	*Control sample mean*
Descriptive	1.7	2.1	1.9	1.4
Numerical	2.4	1.8	2.3	2.7
Research	2.8	2.8	2.5	3.0
Facts	3.0	3.1	3.1	2.9

1= most frequently needed

4= least frequently needed

When asked to rank several choices for possible sources of information in the future, the total sample and the subgroups agreed. Fifty percent ranked a central source where all information requests could be answered first (mean=1.4). The other options and their mean ranks were: (1) a central source to answer some requests and refer others (mean=1.8), (2) a central referral service to direct requestors to appropriate sources (mean=2.1), (3) no change from current sources (mean=2.8), and (4) several sources in varying locations each handling different types of information (mean=3.4).

Respondents were also asked whether they would use computer searches of the literature if such services were available. Only 10.2% of the total sample said that they would not use such a service. 64.6% responded with a yes, some qualified, and 25.2% did not know whether they would use such a service if it was available to them. The responses of the total sample and subgroups are presented in Table 19.

TABLE 19: PROJECTED USE OF COMPUTER LITERATURE SEARCHES

Responses	*Total sample (%)*	*State staff sample (%)*	*Researcher sample (%)*	*Control sample (%)*
Total positive	*64.6*	*88.5*	*75.8*	*42.4*
Yes	20.4	26.9	21.0	16.9
Yes, already use	17.7	15.4	30.6	5.1
Yes, if free	13.6	23.1	12.9	10.2
Yes, if fast	12.9	23.1	11.3	10.2
Total negative	*10.2*	*7.7*	*3.2*	*18.7*
No	6.8	7.7	1.6	11.9
No, don't need	3.4	---	1.6	6.8
Don't know	*25.2*	*3.8*	*21.0*	*39.0*

When asked where they would prefer to get copies of documents they needed, over fifty percent of the total sample, the researchers and the controls, and 36% of state staffs preferred to get them from their local library, through its own collection or through interlibrary loan. 20.5% of the total sample (44% of the state staffs) preferred the option of borrowing paper copies from a central source. Very few chose the other options presented which included borrowing microfilms from a central source and purchasing copies.

The final question on possible future services asked respondents to indicate how long a time span they would be willing to accept for services. The turn-around-time that the total sample found acceptable for literature searches and document provision are presented in Table 20.

TABLE 20: ACCEPTABLE TURN-AROUND-TIME FOR INFORMATION SERVICES

Service	*1 week or less*	*1-2 weeks*	*2-3 weeks*	*3-4 weeks*
Literature searches	21.9%	58.9%	17.2%	2.0%
Documents	18.0%	60.0%	19.3%	2.7%

Conclusions

This study was undertaken to assess the current information needs and uses of Indiana vocational educators. Its objectives were to define the appropriate target audience and service needs for a new information service. The following conclusions address these objectives.

1. State agency personnel are the most knowledgeable users of information.

Contrary to the hypothesis that the researchers sample would be the most knowledgeable information users, state staffs reported greater familiarity with library indexes and microforms. They also attended meetings and read professional journals more often than the other groups studied. State agency personnel also reported needing all types of information much more frequently than the controls.

2. State agency personnel are frequently consulted as sources of information.

Of the ten options for sources of information presented in the second section of the questionnaire, personal contact with a state vocational education agency was the most frequent or second most frequent first for six out of ten types of information. This does not include local colleague as a source for the state staffs sample, which would make the occurrence of state agency personnel as an information source even higher.

3. Indiana vocational educators prefer personal contact and convenient sources for information.

This conclusion substantiates conclusions drawn by the Magisos (1971) study and others, that information seekers choose convenience over quality. It is based on the frequent choice of personal contact with local colleagues, local librarians, and state agency personnel, or a personal collection of documents as a first source for information.

4. Vocational educators in Indiana do not use many of the sources of information available to them.

Many of the respondents were not familiar with or did not use many library tools to find information. Of sources used, the local library, information services, and librarians were among the least frequently used sources of information. They were also judged least useful by respondents. Respondents relied on personal contact, not printed documents, for information.

5. Indiana vocational educators need descriptive information and numerical data more frequently than they need research findings or facts.

Although the respondents reported needing all types of information to some extent, descriptive information was ranked as the more commonly needed information by the total sample. State staffs ranked numerical data slightly higher than descriptive data, but reported needing all types of information substantially more than controls.

6. Vocational educators in Indiana prefer to borrow documents when they need them.

Most respondents chose some sort of library as their first source for copies of documents. They preferred the option of borrowing paper copies of documents, either locally or from a central source, over purchasing them.

7. Many Indiana vocational educators are not familiar with microforms and do not have access to microform equipment.

Of the total sample, only 65.5% had used microfilm, and only 57% had used microfiche, 44% had access to a microfilm reader, 37.7% had access to a microfiche reader, and 22.1% had access to a reader-printer. Those who had access to microform equipment still preferred a paper copy of the document they needed.

8. Most Indiana vocational educators are willing to wait for the information they need.

Approximately 20% of the sample indicated that they wanted literature searches or documents in one week or less. The other 80% were willing to wait one to four weeks for these materials when they needed them.

9. Vocational educators in Indiana project using computer literature search services.

64.6% of the total sample indicated that they would use computer literature search services. State staffs and researchers, however, were almost twice as likely as controls to say yes, they would use computer search services.

Recommendations

The following recommendations for developing and implementing an information service for Indiana vocational educators are based on the conclusions from the study.

1. State agency personnel should be the initial target audience of the information service.

State staffs act as linking agents with vocational administrators and educators throughout the state. It is important that they have access to the most current information for themselves and to supply to others. Therefore, the developing information service should act immediately to serve state agency personnel. As the capacity of the service to supply information expands, project personnel on state-funded projects should be the next group served.

2. Services provided should be as convenient as possible for the users.

Since information seekers choose convenient sources, the services provided should be easily accessible and convenient to use. Users should have on-hand the phone number and address of the service. Loaned materials should be sent with return envelopes so they can be easily returned.

3. Service staff should personally contact prospective users.

In an effort to promote the information service and to give users a sense of personal service, the service staff should seek to meet all potential service users. This could be accomplished by visiting state agency personnel and attending state meetings.

4. Service staff should help users identify appropriate sources of information.

The staff should be aware of collections of materials throughout the state. When users need services or materials for which another library or information center would be a better source, they could be referred to that source. The staff should particularly be aware of the services and collections of other SBVTE-funded projects such as the ICMC and the career centers and of collections of ERIC documents and curriculum materials.

5. The service should base its selection policy on identified information needs.

The heavier need for descriptive information and numerical data suggests that the service should limit its selection of materials primarily to these two types of materials. State of the art reviews in all areas of vocational education and several good statistical abstracts should be the primary purchases.

6. Paper copies of documents should be available for loan when possible.

Because of the unfamiliarity with microforms and the equipment needed to read them, the service should attempt to loan documents in paper copy when feasible. This would mean that when ERIC documents were requested, an original copy should be sought or the microfiche should be copied onto paper. Since this will be quite expensive, the service should also explore ways to promote the use of microforms among Indiana vocational educators.

7. The service should stress accuracy rather than speed in providing services.

Most respondents were willing to wait at least a full week for the information they needed. Therefore, the service need not stress speed at the expense of accuracy, but can take the time needed to respond to requests in the best way possible.

8. Computer literature searches should be provided to those who can use them.

Computer searches can be expensive to run. To be cost-effective, they should be advertised and provided to those who really need them. The top candidates should be state staffs followed by funded project personnel.

Summary

This study was undertaken to determine specific user populations and needed services for a new information service by identifying the current information needs and uses of a sample of Indiana vocational educators.

After reviewing the literature of information use, the author developed and tested two parallel questionnaires. These were mailed to three sample groups of vocational educators; state staffs, funded project personnel, and a random sample. A total of 152 questionnaires (64.6%) were returned. The resultant data were analyzed using a package computer program.

The findings include demographic data on the sample and data on the samples' familiarity with sources and formats of information, needs for information, sources of information used, and preferences for future services. The data is presented as simple frequencies in most cases.

The major conclusions drawn from the findings are that state agency personnel are the most knowledgeable information users and are frequently sources of information. In addition it was concluded that Indiana vocational educators prefer personal contact and convenient sources for information, do not use many available sources of information, most frequently need descriptive information and numerical data, prefer to borrow documents they need, are not familiar with microforms and microform equipment, are willing to wait for information, and project using computer literature search services.

The recommendations for the information service drawn from these conclusions are:

- State agency personnel should be the initial target audience.
- Services should be convenient for the users.
- Service staff should be in personal contact with users.
- Service staff should help users identify appropriate sources.
- Selection policy should be based on identified information needs.
- Paper copies should be available for loans.
- The service should stress accuracy over speed.
- Computer literature searches should be provided to those who need them.

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LETTER SENT TO RESEARCHER SAMPLE

STATE OF INDIANA

State Board of
Vocational and Technical Education

INDIANAPOLIS 46204

401 Illinois Building
17 West Market Street
Indianapolis, Indiana 46204
Phone (317) 633-7673

February 14, 1978

Dear Colleagues:

The State Board of Vocational and Technical Education has funded a project at Indiana University to develop an information service which will eventually serve all Indiana vocational educators. JoAnn Brooks has been hired as the Information Specialist for this project; as an initial planning step she has designed a user needs study.

I think that this kind of information service can be of great value to those working on research and development projects in Indiana. Because you have received or are currently receiving R & D funds, you have been selected to receive the enclosed questionnaire which seeks to determine your information uses and needs, especially in regards to your SBVTE-funded project. Your responses to this questionnaire will enable Ms. Brooks to develop an information service which can serve you effectively in the future. Pretesting has shown that completion of the questionnaire takes approximately 15 minutes. I would appreciate your taking time from your very busy schedule to complete it and return it in the prepaid envelope provided.

Thank you for your participation.

Sincerely,

Don K. Gentry

DON K. GENTRY
Executive Officer/State Director
of Vocational Education

DKG/EH:djd

Enclosure

LETTER SENT STATE STAFF SAMPLE

45.

research | dissemination | service

to promote the effective use of research and development information

Department of Vocational Education
Indiana University Library, W501
Bloomington, IN 47401

(812)337-7751

December, 1977

Dear Colleague:

As you possibly know, the State Board of Vocational and Technical Education has funded a project at Indiana University to develop an information retrieval and dissemination service for Indiana vocational educators. As a first step in planning this information system, I am sending you the enclosed questionnaire which will help determine your information uses and needs so that I can develop an effective system to serve you. The questionnaire takes only 15 minutes to answer, and I would appreciate your taking time from your busy schedule to fill it out and return it in the prepaid envelope provided.

Although the information service is still very much in the planning stage and its final range of services undetermined, some services are immediately available; i.e., we have access to the whole range of facilities and services of the Indiana University Library. This means I can provide you with computer searches of ERIC, AIM/ARM, Sociological Abstracts, Psychological Abstracts, INDIRS (Indiana census, vital statistics, and other data), and other data bases. We can also get copies of journal articles, ERIC documents, and other materials which the I.U. Library collects. You may begin making information requests immediately, by contacting me at the address and phone listed above. I will be happy to assist you in any way possible. In fact, your questions now will help me determine realistic priorities for the future development of a comprehensive information system.

Thank you in advance for answering the questionnaire. Please call on me if you have specific information requests or general questions on what services and materials I can provide.

Sincerely,

JoAnn Brooks

JoAnn Brooks
Information Specialist

JAB:nes

Supported by grants from the State of Indiana | Research Coordinating Unit | State Board of Vocational and Technical Education

LETTER SENT TO CONTROL SAMPLE

STATE OF INDIANA

State Board of
Vocational and Technical Education

INDIANAPOLIS 46204

401 Illinois Building
17 West Market Street
Indianapolis, Indiana 46204
Phone (317) 633-7673

February 14, 1978

Dear Colleagues:

The State Board of Vocational and Technical Education has funded a project at Indiana University to develop an information service which will eventually serve all Indiana vocational educators. JoAnn Brooks has been hired as the Information Specialist for this project; as an initial planning step she has designed a user needs study.

You have been randomly selected from a list of Indiana vocational educators to receive the enclosed questionnaire which seeks to determine your information uses and needs. Your responses to this questionnaire will enable Ms. Brooks to develop an information service which can serve you effectively in the future. Pretesting has shown that completion of the questionnaire takes approximately 15 minutes. I would appreciate your taking time from your very busy schedule to complete it and return it in the prepaid envelope provided.

Thank you for your participation.

Sincerely,

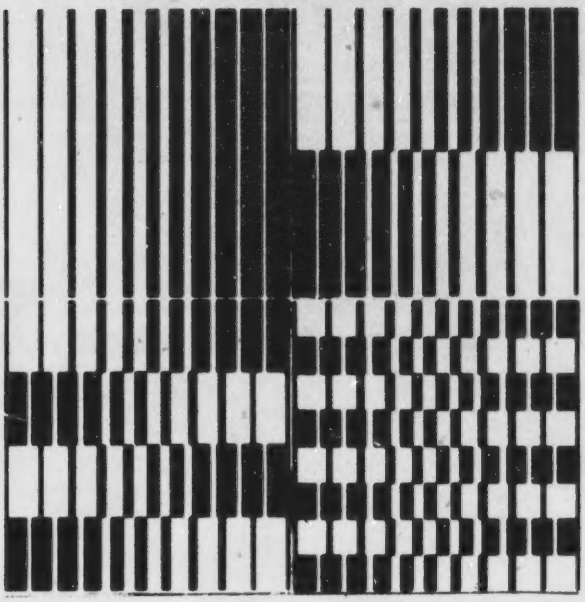
DON K. GENTRY
Executive Officer/State Director
of Vocational Education

DKG/EH:djd

Enclosure

QUESTIONNAIRE SENT TO RESEARCHER SAMPLE

SURVEY OF INFORMATION NEEDS
OF INDIANA VOCATIONAL EDUCATORS



Research Dissemination Service
Department of Vocational Education
Indiana University

Bloomington, Indiana

Your cooperation in completing this questionnaire is greatly appreciated. It will help us plan ways to meet your increasing information needs through an information dissemination system for Indiana vocational educators. The demographic information asked for will be used only for comparative purposes and all individual answers will remain confidential.

I. Please put a check (✓) in the box in front of the appropriate answer to each question or statement.

1. Sex:

☐ Male ☐ Female

2. Age:

☐ 29 or below ☐ 40-49 ☐ 60 or above

☐ 30-39 ☐ 50-59

3. Highest degree earned:

☐ High school ☐ Bachelors ☐ Specialist

☐ 2 year degree ☐ Masters ☐ Doctorate

4. Institution granting highest degree earned; write school name:

_____

5. If you are currently working towards a degree, what degree:

☐ Not applicable ☐ Bachelors ☐ Specialist

☐ High school ☐ State certificate ☐ Doctorate

☐ 2 year degree ☐ Masters

6. If you are currently working towards a degree, what school are you attending?

_____

7. In your present position, what do you consider to be your primary responsibility, number with a 1; if you have more than one responsibility, number your secondary duties with a 2.

☐ Administration ☐ Teaching ☐ Other specify):

☐ Research ☐ Counseling _____

8. What is your field of speciality?

☐ Vocational-Technical (all fields) ☐ Distributive ☐ Industrial arts

☐ Agricultural ☐ Health occupations ☐ Technical

☐ Business and office ☐ Home economics ☐ Trade and industrial

☐ Other (specify): _____

_____

9. Which term best describes the institution in which you are employed? (Check more than one if necessary.)

☐ Secondary school ☐ College or university

☐ Post-secondary school ☐ Other (specify): _____

☐ Teacher's college _____

10. Do you serve any of the following special groups? Check (✓) as many as apply.

☐ Culturally disadvantaged ☐ Mentally retarded

☐ Economically disadvantaged ☐ Physically handicapped

☐ Learning disabled ☐ None of the above

☐ Other (specify): _____

_____

11. How many professional meetings and/or workshops did you attend in the past year?

☐ 0 ☐ 2 ☐ 4

☐ 1 ☐ 3 ☐ 5 or more

12. Have you visited any local, state or national education agencies, institutions or schools for purposes of observation or consultation in the past year?

☐ Yes ☐ No

13. Check (✓) all institutions or services which you have used in the past year to find materials relating to your work:

- ☐ Secondary school library
- ☐ Post-secondary school library
- ☐ College/University library
- ☐ Public library
- ☐ State library
- ☐ Audio-visual center
- ☐ State education agencies
- ☐ Indiana Curriculum Materials Center
- ☐ Inter-library loan
- ☐ Other (specify): _____

_____

14. Which journals do you see regularly either through personal subscription, office or school circulation, or library reading; check (✓) all that apply.

- ☐ *Allied Health Trends*
- ☐ *American Vocational Journal*
- ☐ *Business Education Forum*
- ☐ *Industrial Education*
- ☐ *Journal of Business*
- ☐ *Journal of Home Economics*
- ☐ *Journal of Industrial Teacher Education*
- ☐ *Journal of Vocational Education Research*
- ☐ *Man/Society/Technology*
- ☐ *Manpower and Vocational Education Weekly*
- ☐ *Occupational Outlook Quarterly*
- ☐ *School Shop*
- ☐ *Vocational Guidance Quarterly*
- ☐ *Other (specify):* _____

_____

_____

15. Have you used any of various indexes or abstracts to find information? Check (√) those you have used, put a zero (0) in front of those that are unfamiliar to you, leave blank those that you know but have not used.

- ☐ Resources in Vocational Education, formerly AIM/ARM
- ☐ RIE (Resources in Education)
- ☐ CIJE (Current Index to Journals in Education)
- ☐ Psychological Abstracts
- ☐ Education Index
- ☐ Dissertation Abstracts
- ☐ Reader's Guide
- ☐ Other (specify):_____

16. Have you used any computer literature search services of indexes or abstracts in the past year? Check (√) those you have used, put a zero (0) in front of those that are unfamiliar to you, leave blank those that you know but have not used.

- ☐ ERIC (RIE and/or CIJE)
- ☐ Psychological Abstracts
- ☐ AIM/ARM
- ☐ Sociological Abstracts
- ☐ DATRIX
- ☐ Other (specify): _____

When you used computer literature search services, were you:

☐ Satisfied ☐ Dissatisfied ☐ Uncertain

17. Have you ever used microfilm?

☐ Yes ☐ No ☐ Don't know

18. Have you ever used microfiche?

☐ Yes ☐ No ☐ Don't know

19. Do you have easy access to a microfilm reader?

☐ Yes ☐ No ☐ Don't know

20. Do you have easy access to a microfiche reader?

☐ Yes ☐ No ☐ Don't know

21. Do you have access to a reader-printer (a machine which prints microform copies onto paper)?

☐ Yes ☐ No ☐ Don't know

You have been included in this study because you have received funding from the State Board of Vocational and Technical Education for a research or development project. In answering the questions in the following section, we ask that you recall, as much as possible, your information seeking activity surrounding your most recent funded project. If you are unable to remember, or never had occasion to seek the type of information called for, answer the questions as if you now needed the type of information mentioned.

II. The following quesions refer to various kinds of information which you may have needed for your funded projects. The first part under each question asks who did the actual information seeking.

If you searched for the information yourself, check (√) A.
If you delegated the responsibility to an employee, check (√) B.
If finding the information was a group responsibility, check (√) C.

The second part of each question lists possible sources of information. Please familiarize yourself with the list and then for each question number the sources in the order you used them to find the information. If you found the information you were seeking after one attempt you need only list a number "1" in front of the appropriate source. If, however, you went to more than one source seeking the information, please number up to "3" the sources you attempted in the order that you used them. If you delegated authority for searching and do not know the sources attempted for a particular type of information, please number those sources you would have attempted in the order you would have used them.

EXAMPLE: When you planned to start a special program for the handicapped in your area and wanted to know if a similar project had been done elsewhere, where did you go for the information?

Who searched?

A [√] Myself B [ ] Employee C [ ] Group

Sources consulted:

[2] Personal contact with local colleague.

[ ] Personal contact with non-local colleague.

[ ] Personal contact with local librarian or information specialist.

[ ] Personal contact with non-local librarian or information specialist.

[3] Personal contact with state vocational education agencies.

[ ] Personal contact with someone in business or industry.

[ ] Personal collection of information materials.

[1] Material in local library or information center.

[ ] Computerized information service.

[ ] Other: _____

_____

1. When you originally considered your project, how did you find out whether or not similar projects were already in progress?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

2. When originally considering the project, how did you find the appropriate person to contact about funding?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

3. When you wanted to find three or four bibliographic references which related to your project, how did you find them?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

4. Once you had the bibliographic references, how did you find the books, journals, or other documents for which you had references?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

5. When you needed specific numerical data for your project such as how many students you could be serving, how many secondary vocational educators there were in the state, etc., how did you attempt to get the data?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

6. When you needed one specific item of information or the answer to a question such as the address of an association or the date a certain law was enacted, how did you attempt to find this information?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

7. When planning your research methodology or developing the methodology for the evaluation of your program, how did you attempt to find information on the various methodologies you could use?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

8. When doing statistical analysis on your data, how did you find materials on the various statistical techniques and which would be most useful for you?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

9. When you developed materials to use in your project, such as curriculum packets, testing instruments, or audio-visual material, how did you attempt to find material to assist you?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

10. When you prepared the introduction and literature review section, and wanted a complete literature search of all research done in the field, how did you get it?

Who searched?

A ☐ Myself B ☐ Employee C ☐ Group

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

11. Please put a check (✓) in front of any source of information used at least once in relation to your work, put an asterisk (*) in front of the source which was most useful to you, and put a zero (0) in front of the source which was least useful among the ones you used.

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

12. On your most recent funded research or development project, what was your responsibility? Please check (✓) all that apply.

- ☐ Proposal writing
- ☐ Project director
- ☐ Principal investigator
- ☐ Research assistant
- ☐ Other: _____

III. Realizing that vocational educators in the state have numerous and varied information needs and unequal access to good sources of information, we are attempting to assess those needs so that we can fill some voids. The answers to the following questions will help us determine your most important needs and what you would accept as possible solutions.

1. Listed below are four basic information needs which you may have. Please rank the four by putting a:

   "1" in front of the type of information you need most frequently.
   "2" in front of your second most frequent information need.
   "3" in front of your third most frequent information need.
   "4" in front of your least frequent information need.

   ☐ Specific facts or reference information needed on a one-time basis such as agency addresses, historical dates, names of leaders in the field, etc.

   ☐ Numerical data such as census data, employment data, student enrollment data, etc.

   ☐ Descriptive information such as specific information about a particular subject, descriptions of programs, or curriculum materials, etc.

   ☐ Research information such as the results of previous research in a particular area, research methodology, instrument design, statistical tools and techniques, etc.

2. In the past you may have gone to various sources for different kinds of information. If it were possible to provide you with a single source for all, which of the options listed below would be your first choice (mark with "1"), your second choice (mark with "2").

   ☐ A central source in the state where all information requests could be answered.

   ☐ A central source in the state where some requests could be answered and others could be referred to the appropriate source.

   ☐ A central referral service which would not handle information, but could direct you to the appropriate source.

   ☐ Several sources in varying locations, each handling a different type of information.

   ☐ I am happy with my current access to information and need no additional sources.

3. If you had access to computer search facilities to do literature searches of RIE, CIJE, Dissertation Abstracts, AIM/ARM, Psychological Abstracts, and others, do you think you would use them? Check (✓) the one answer which most applies.

- ☐ Yes, I already use them.
- ☐ Yes, if it were free.
- ☐ Yes, if it didn't take too long.
- ☐ Yes.
- ☐ No, I've had bad luck with them in the past.
- ☐ No, I never need literature searches.
- ☐ No, I don't trust computer searches.
- ☐ No.
- ☐ I don't know.

4. Presuming a service was initiated to provide you with bibliographic references relevant to your needs, how would you then get the documents cited on the bibliography? Please rank your first (1), second (2), and third (3) choices on the list below.

- ☐ Find them at my local library.
- ☐ Get them through my local library inter-library loan.
- ☐ Borrow microform copies from a central location.
- ☐ Borrow originals or photocopies from a central location.
- ☐ Purchase microform copies from a central location.
- ☐ Purchase photocopies from a central location.
- ☐ Other: _____

5. If you requested a literature search, what would be an acceptable (as opposed to ideal) turn around time from request to receipt of a bibliography?

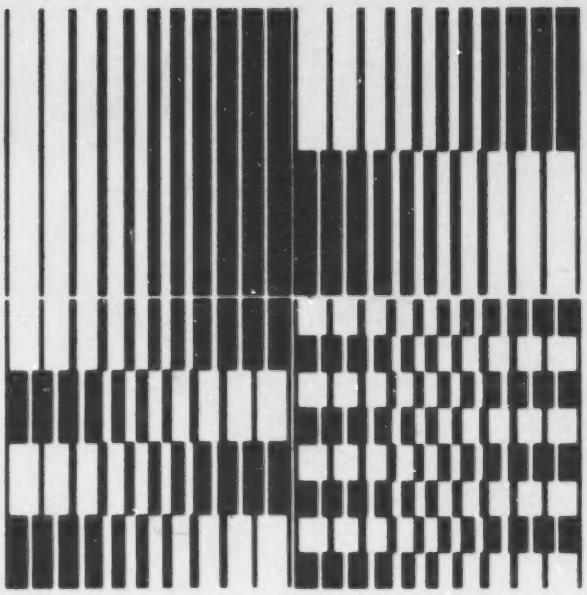
- ☐ 1 week or less
- ☐ 1 to 2 weeks
- ☐ 2 to 3 weeks
- ☐ 3 to 4 weeks

6. If you requested copies of documents, what would be an acceptable (not ideal) turn around time?

- ☐ 1 week or less
- ☐ 1 to 2 weeks
- ☐ 2 to 3 weeks
- ☐ 3 to 4 weeks

7. We are conducting this survey to determine your current use of and future needs for information, so that we can plan an efficient and effective information service to serve you. Please add below any comments on your information needs or suggestions for information services you would like to see provided.

SURVEY OF INFORMATION NEEDS OF INDIANA VOCATIONAL EDUCATORS



Research Dissemination Service
Department of Vocational Education
Indiana University

Bloomington, Indiana

Your cooperation in completing this questionnaire is greatly appreciated. It will help us plan ways to meet your increasing information needs through an information dissemination system for Indiana vocational educators. The demographic information asked for will be used only for comparative purposes and all individual answers will remain confidential.

I. Please put a check (✓) in the box in front of the appropriate answer to each question or statement.

1. Sex:

☐ Male ☐ Female

2. Age:

☐ 29 or below ☐ 40-49 ☐ 60 or above

☐ 30-39 ☐ 50-59

3. Highest degree earned:

☐ High school ☐ Bachelors ☐ Specialist

☐ 2 year degree ☐ Masters ☐ Doctorate

4. Institution granting highest degree earned; write school name:

_____

5. If you are currently working towards a degree, what degree:

☐ Not applicable ☐ Bachelors ☐ Specialist

☐ High school ☐ State certificate ☐ Doctorate

☐ 2 year degree ☐ Masters

6. If you are currently working towards a degree, what school are you attending?

_____

7. In your present position, what do you consider to be your primary responsibility, number with a 1; if you have more than one responsibility, number your secondary duties with a 2.

☐ Administration ☐ Teaching ☐ Other specify):

☐ Research ☐ Counseling _____

8. What is your field of speciality?

- ☐ Vocational-Technical (all fields)
- ☐ Distributive
- ☐ Industrial arts
- ☐ Agricultural
- ☐ Health occupations
- ☐ Technical
- ☐ Business and office
- ☐ Home economics
- ☐ Trade and industrial
- ☐ Other (specify): _____

_____

9. Which term best describes the institution in which you are employed? (Check more than one if necessary.)

- ☐ Secondary school
- ☐ College or university
- ☐ Post-secondary school
- ☐ Other (specify): _____
- ☐ Teacher's college

_____

10. Do you serve any of the following special groups? Check (✓) as many as apply.

- ☐ Culturally disadvantaged
- ☐ Mentally retarded
- ☐ Economically disadvantaged
- ☐ Physically handicapped
- ☐ Learning disabled
- ☐ None of the above
- ☐ Other (specify): _____

_____

11. How many professional meetings and/or workshops did you attend in the past year?

- ☐ 0
- ☐ 2
- ☐ 4
- ☐ 1
- ☐ 3
- ☐ 5 or more

12. Have you visited any local, state or national education agencies, institutions or schools for purposes of observation or consultation in the past year?

- ☐ Yes
- ☐ No

13. Check (✓) all institutions or services which you have used in the past year to find materials relating to your work:

- ☐ Secondary school library
- ☐ Post-secondary school library
- ☐ College/University library
- ☐ Public library
- ☐ State library
- ☐ Audio-visual center
- ☐ State education agencies
- ☐ Indiana Curriculum Materials Center
- ☐ Inter-library loan
- ☐ Other (specify): _____

_____

14. Which journals do you see regularly either through personal subscription, office or school circulation, or library reading; check (✓) all that apply.

- ☐ *Allied Health Trends*
- ☐ *American Vocational Journal*
- ☐ *Business Education Forum*
- ☐ *Industrial Education*
- ☐ *Journal of Business*
- ☐ *Journal of Home Economics*
- ☐ *Journal of Industrial Teacher Education*
- ☐ *Journal of Vocational Education Research*
- ☐ *Man/Society/Technology*
- ☐ *Manpower and Vocational Education Weekly*
- ☐ *Occupational Outlook Quarterly*
- ☐ *School Shop*
- ☐ *Vocational Guidance Quarterly*
- ☐ *Other (specify):* _____

_____

_____

15. Have you used any of various indexes or abstracts to find information? Check (√) those you have used, put a zero (0) in front of those that are unfamiliar to you, leave blank those that you know but have not used.

- ☐ Resources in Vocational Education, formerly AIM/ARM
- ☐ RIE (Resources in Education)
- ☐ CIJE (Current Index to Journals in Education)
- ☐ Psychological Abstracts
- ☐ Education Index
- ☐ Dissertation Abstracts
- ☐ Reader's Guide
- ☐ Other (specify):_____

16. Have you used any computer literature search services of indexes or abstracts in the past year? Check (√) those you have used, put a zero (0) in front of those that are unfamiliar to you, leave blank those that you know but have not used.

- ☐ ERIC (RIE and/or CIJE)
- ☐ Psychological Abstracts
- ☐ AIM/ARM
- ☐ Sociological Abstracts
- ☐ DATRIX
- ☐ Other (specify): _____

When you used computer literature search services, were you:

☐ Satisfied ☐ Dissatisfied ☐ Uncertain

17. Have you ever used microfilm?

☐ Yes ☐ No ☐ Don't know

18. Have you ever used microfiche?

☐ Yes ☐ No ☐ Don't know

19. Do you have easy access to a microfilm reader?

☐ Yes ☐ No ☐ Don't know

20. Do you have easy access to a microfiche reader?

☐ Yes ☐ No ☐ Don't know

21. Do you have access to a reader-printer (a machine which prints microform copies onto paper)?

☐ Yes ☐ No ☐ Don't know

II. The following questions refer to various kinds of information you may have needed in the past or may need in the future in your work. The first part under each question (1-10) asks you to please check (✓) "Yes" if you have ever searched for similar kinds of information in the past; and to please check (✓) "No" if you have never looked for that type of information.

The second part under each question (1-10) is a list of possible sources for the information sought. If you answered "Yes" to the first part of the question, then number the sources in the order that you used them when you last sought that kind of information. If you found the material you needed after one attempt, you need only list a number "1" in front of the appropriate source. If, however, you went to more than one source seeking the information, please number up to three (3) the sources you used in the order that you used them.

If you answered the first part of the question "No" and thus have never had occasion to seek the type of information called for, answer the question by numbering the first three (3) sources you would try, in the order you would try them, if you had to find the type of information mentioned.

EXAMPLE: If you were thinking of beginning a new class and you wanted to know if a similar class had been taught elsewhere or you wanted to see curriculum examples or evaluations of similar classes, how would you try to find the information?

Have you ever had to find similar information?

☐ Yes ☑ No

Sources consulted:

☐ Personal contact with local colleague.	☐ Personal contact with someone in business or industry.
1 Personal contact with non-local colleague.	☐ Personal collection of information materials.
2 Personal contact with local librarian or information specialist.	☐ Material in local library or information center.
☐ Personal contact with non-local librarian or information specialist.	☐ Computerized information service.
3 Personal contact with state vocational education agencies.	☐ Other: _____

1. If you considered such innovations as adding a new class or beginning a new project, how would you attempt to find information on whether or not similar innovations had been tried by others?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

2. If you wished to seek grant funds for a special project, how would you attempt to find appropriate funding agencies?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

3. If you wanted to find three or four bibliographic references to articles or books on a particular subject, how would you find them?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

4. Once you had bibliographic references, how would you try to find books, journals, or other documents for which you had found references?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

5. If you needed specific numerical data such as how many students of a certain age in the state or the number of secondary vocational educators in the state or the number of post-secondary vocational schools in the state, how would you find it?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

6. If you needed one specific item of information or the answer to a question such as the address of an association or the date a certain law was enacted, how would you attempt to find it?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

7. If you were planning a research project or needed to evaluate a class or program, where would you try to find information on appropriate research or evaluation methods which you could use?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

8. If you did statistical analysis on the data from your research or evaluation, how would you attempt to find out about various statistical techniques?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

9. If you developed materials for your class or for use in a new project such as special curricula, testing instruments, or audio-visual materials, where would you try to find material to help you?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

10. If you needed a complete literature search on a particular subject; for example bibliographic references to everything published on performance based education in vocational education in the past five years, how would you attempt it?

Have you ever had to find similar information?

☐ Yes ☐ No

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

11. Please put a check (✓) in front of any source of information used at least once in relation to your work, put an asterisk (*) in front of the source which was most useful to you, and put a zero (0) in front of the source which was least useful among the ones you used.

Sources consulted:

- ☐ Personal contact with local colleague.
- ☐ Personal contact with non-local colleague.
- ☐ Personal contact with local librarian or information specialist.
- ☐ Personal contact with non-local librarian or information specialist.
- ☐ Personal contact with state vocational education agencies.
- ☐ Personal contact with someone in business or industry.
- ☐ Personal collection of information materials.
- ☐ Material in local library or information center.
- ☐ Computerized information service.
- ☐ Other: _____

_____

12. Have you ever applied for or received outside funding for any research or development projects?

- ☐ No.
- ☐ In process of applying.
- ☐ Applied for, but did not receive funding.
- ☐ Received funding.

III. Realizing that vocational educators in the state have numerous and varied information needs and unequal access to good sources of information, we are attempting to assess those needs so that we can fill some voids. The answers to the following questions will help us determine your most important needs and what you would accept as possible solutions.

1. Listed below are four basic information needs which you may have. Please rank the four by putting a:

   "1" in front of the type of information you need most frequently.
   "2" in front of your second most frequent information need.
   "3" in front of your third most frequent information need.
   "4" in front of your least frequent information need.

   ☐ Specific facts or reference information needed on a one-time basis such as agency addresses, historical dates, names of leaders in the field, etc.

   ☐ Numerical data such as census data, employment data, student enrollment data, etc.

   ☐ Descriptive information such as specific information about a particular subject, descriptions of programs, or curriculum materials, etc.

   ☐ Research information such as the results of previous research in a particular area, research methodology, instrument design, statistical tools and techniques, etc.

2. In the past you may have gone to various sources for different kinds of information. If it were possible to provide you with a single source for all, which of the options listed below would be your first choice (mark with "1"), your second choice (mark with "2").

   ☐ A central source in the state where all information requests could be answered.

   ☐ A central source in the state where some requests could be answered and others could be referred to the appropriate source.

   ☐ A central referral service which would not handle information, but could direct you to the appropriate source.

   ☐ Several sources in varying locations, each handling a different type of information.

   ☐ I am happy with my current access to information and need no additional sources.

3. If you had access to computer search facilities to do literature searches of RIE, CIJE, Dissertation Abstracts, AIM/ARM, Psychological Abstracts, and others, do you think you would use them? Check (✓) the one answer which most applies.

- ☐ Yes, I already use them.
- ☐ Yes, if it were free.
- ☐ Yes, if it didn't take too long.
- ☐ Yes.
- ☐ No, I've had bad luck with them in the past.
- ☐ No, I never need literature searches.
- ☐ No, I don't trust computer searches.
- ☐ No.
- ☐ I don't know.

4. Presuming a service was initiated to provide you with bibliographic references relevant to your needs, how would you than get the documents cited on the bibliography? Please rank your first (1), second (2), and third (3) choices on the list below.

- ☐ Find them at my local library.
- ☐ Get them through my local library inter-library loan.
- ☐ Borrow microform copies from a central location.
- ☐ Borrow originals or photocopies from a central location.
- ☐ Purchase microform copies from a central location.
- ☐ Purchase photocopies from a central location.
- ☐ Other: _____

5. If you requested a literature search, what would be an acceptable (as opposed to ideal) turn around time from request to receipt of a bibliography?

- ☐ 1 week or less
- ☐ 1 to 2 weeks
- ☐ 2 to 3 weeks
- ☐ 3 to 4 weeks

6. If you requested copies of documents, what would be an acceptable (not ideal) turn around time?

- ☐ 1 week or less
- ☐ 1 to 2 weeks
- ☐ 2 to 3 weeks
- ☐ 3 to 4 weeks

7. We are conducting this survey to determine your current use of and future needs for information, so that we can plan an efficient and effective information service to serve you. Please add below any comments on your information needs or suggestions for information services you would like to see provided.

APPENDIX B

ADVISORY COMMITTEE FOR INFORMATION SERVICE
AND
EDITORIAL BOARD FOR PUBLICATION SERVICE

ADVISORY COMMITTEE FOR INFORMATION SERVICE

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Supportive Services and Program Improvement Unit
State Board of Vocational and Technical Education

APPENDIX C

COMPREHENSIVE PLAN FOR AN INFORMATION ORGANIZATION AND RETRIEVAL SERVICE FOR INDIANA VOCATIONAL EDUCATORS

PREFACE

The Vocational Education Information Services is a project funded by the State Board of Vocational and Technical Education (SBVTE) which promotes effective communication by increasing the flow of information among vocational educators. Its goal is to support vocational education in Indiana by developing more effective products for wide dissemination and by facilitating more efficient use of information. There are two components of the services: (1) Publication and Dissemination Service and (2) the Information Organization and Retrieval Service.

The project, originally called the Research Dissemination Service, was a publication and dissemination service with responsibilities to abstract, synthesize, edit, and publish information about selected SBVTE-funded projects in a series of newsletters and reports and to disseminate these products to appropriate state and national target audiences. In response to a request from the SBVTE in 1977, the Research Dissemination Service was enlarged to include an information organization and retrieval service with responsibilities to acquire, organize, retrieve, and store research and development information and documents. At that time, the name of the project was changed to Vocational Education Information Services. The following is the comprehensive plan developed by the information specialist for the Information Organization and Retrieval Service.

COMPREHENSIVE PLAN FOR AN INFORMATION ORGANIZATION AND RETRIEVAL SERVICE FOR INDIANA VOCATIONAL EDUCATORS

by JoAnn Brooks
Information Specialist

An information specialist's primary objective when planning an information organization and retrieval service is to develop a cost-effective system which provides rapid access to the materials and information needed by users. This type of system must quickly fill user needs from its own resources and be able to access other systems when additional resources are needed. The two major constraints on the system are that it be (1) cost-justified and (2) flexible enough to expand or modify with changing system needs and changing technology.

The Vocational Education Information Services' Information and Retrieval Service [hereafter called the Information Service] has to work within the limits identified above and still be able to provide materials and information to users. In order to rapidly and effectively serve its users, the Information Service has specific material, organization, and information needs. It must:

1. Have access to state documents and be able to retrieve these documents by subject, author, title, and institution.

2. Be flexible so it can control all forms of information including books, journals, pamphlets, unpublished reports, state project proposals, reports and products, microforms, and audiovisual materials.

3. Be compatible with other libraries and information systems to allow intersystem communication.

4. Establish communication lines with specialists in the fields of vocational education and information and dissemination in order to provide human resources.

Procedures for organizing the Information Service and the materials and information it needs must be developed and implemented. The following pages: (1) outline the processes that must be established, (2) identify what must be considered when developing these processes, and (3) propose policies for the Vocational Education Information Services' Information Organization and Retrieval Service.

Selection

Selection is the process of identifying materials to be acquired for the collection. It is a two part process. The first is to identify the subject areas and types of materials relevant to the collection and establish a written selection policy. The second is to identify the titles of materials to be purchased.

Considerations. The location of the Information Organization and Retrieval Service and its relationships with other organizations will play a large part in the development of the selection policy. As an independent unit, a very broad selection policy would be necessary. As long as the Information Service is based in the main Indiana University Library, however, the collections of that library and its departmental affiliates can be relied upon to provide numerous documents.

The Education Library at Indiana University (I.U.) owns a complete collection of ERIC microfiche, has a curriculum materials center which loans resources, subscribes to many journals of interest to educators, and regularly buys new books of importance to vocational education. The main I.U. Library also subscribes to relevant journals and acquires books relevant to the Information Service. In addition, the I.U. Library is a government documents depository library which receives almost all documents produced by the U.S. government and makes them available on a loan basis.

In developing the selection policy, the other State Board of Vocational and Technical Education (SBVTE) projects which serve information needs must also be considered. The Indiana Curriculum Materials Center (ICMC) in Terre Haute buys and supplies vocational curriculum materials and should be considered a referral source. The purchase of curriculum materials would be inappropriate and a costly duplication. This is also true for materials relating to vocational career exploration; these materials are available through the two career resource projects funded by the SBVTE.

A final consideration before establishing a selection policy is the material regularly or irregularly received by the SBVTE and forwarded to the Information Service. These materials include issues of *Resources in Education* and *Resources in Vocational Education*, miscellaneous reports disseminated nationally by states and territories, and proposals, products, and final reports of all SBVTE-funded projects.

Proposed policy. When the collections mentioned above are taken into consideration, the materials the Information Service needs to acquire are identified. The following materials will be considered for selection:

1. Reference tools which are needed to quickly answer specific questions. These include dictionaries, almanacs, directories, bibliographies, etc.

2. Journal subscriptions, including those not purchased by the I.U. Libraries and a select few which are duplicates but must be scanned regularly to offer current information.

3. Vocational aptitude or career awareness tests which vocational educators often need.

4. Names of vocational educators in Indiana and the nation to create a human resource file.

5. State plan of vocational education from all the states and territories.

6. State laws and regulations regarding vocational education and teacher certification from all the states and territories.

7. Reports and books not available in other collections or used so frequently as to demand duplicate purchase.

This proposed list of items to acquire may require additions and changes as the Information Service or its demands change. However, for the first two operational years, this relatively limited list will be adequate.

Acquisition

Acquisition is the process of buying or otherwise acquiring the materials which have been selected. The process includes identifying sources from which documents are available and establishing procedures for encumbering funds, keeping statistical records, and avoiding duplicate purchases.

Proposed policy. A systematic ordering procedure will be established to assure that items already owned or on-order are not ordered again. A simple on-order file, in alphabetical order by title, will be maintained. All new orders will be checked against the on-order file and the Information Service's title catalog to assure that the new order is not a duplicate. The on-order file will also serve as a record of encumbered monies.

When an order is received, the record from the on-order file will be transferred to a separate file of orders received. This file will be used to record acquisitions at the end of each fiscal year.

Organization of Materials

Classification and cataloging.

Classification and cataloging are required to organize materials. Classification traditionally involves the use of a discreet numbering scheme as a location device for each item and a controlled vocabulary list for assigning descriptors which reflect subject content and provide multiple access points to each document. Cataloging involves providing a standard bibliographic description for each document, in accordance with rules established by the library profession, in order to permit inter-library communication and cooperation.

Considerations. The documents, books, journals, and government publications available to the Information Service from outside sources such as the I.U. Library all have some form of organization which will allow access. Thus the materials which must be classified and cataloged are those which the Information Service owns.

There are numerous systems which could be used to organize these materials. The Library of Congress (LC) provides the standard for cataloging employed by many libraries and classification standards which include a numbering scheme and a subject authority list. LC works well for large collections of books but does not adapt well to specialized collections which consist primarily of report literature. A far better classification and cataloging standard, applicable to education report literature, is available to the Information Service.

Education Resources Information Center (ERIC) under the auspices of the National Institute of Education (NIE) has developed the *ERIC Processing Manual*, a

four volume manual, for indexing and abstracting report literature and has also developed a controlled vocabulary list in the *Thesaurus of ERIC Descriptors* which is applicable to all areas of education. The ERIC standards for cataloging and the ERIC vocabulary for classification are appropriate for use with the Information Service's collection. In addition, the use of ERIC guidelines will make the system compatible with all ERIC Clearinghouses and many other state educational information systems which are using or adapting ERIC.

Proposed policy. The ERIC system will be used to catalog and classify materials. The *ERIC Processing Manual* will be used to catalog and classify materials. The *Thesaurus of ERIC Descriptors* will be used to assign terms which identify the materials subject matter. Following ERIC guidelines, no numerical subject classifications will be used. Each item will be assigned a unique six digit number with an IN prefix and be shelved by that number.

Maintaining classification and cataloging information.

Classification and cataloging information can be maintained in several different ways. For example, cards can be produced for each item and filed into a card catalog or a key-sort system can be used. However, computer technology offers a far better approach to the organization process.

Considerations. By inputting information generated from the classification and cataloging processes into machine readable form all parts of the record become accessible. In addition, when new technologies and formats are developed machine readable files can be converted with relative ease. Information handled manually does not convert to new formats easily.

Maintaining computerized data files can be a very expensive process when hardware must be found and software developed. This will not be a problem for the Information Service, however, as the Wrubel Computing Center at I.U. can supply both hardware and software. Wrubel has several data base handling programs already available. The best of these programs, for access to all parts of the record, is the FAMULUS program.

Proposed policy. The classification and cataloging information for each document will be input into machine readable format, processed using available software, and output in the form of a catalog. The documents will be accessible by subject, author, title, and institution.

Which documents to classify and catalog.

Determining which documents to classify and catalog and which to handle more simply is the final decision regarding organizing materials. The documents received by the Information Service often include reports which have already been indexed by the ERIC system or by the now inoperative AIM/ARM Project. In addition, the Information Service will be receiving journals and ephemeral material such as clippings, conference announcements, catalogs, brochures, and newsletters.

Considerations. It has been estimated that it costs approximately $50.00 to move a document through ERIC technical processing. To reprocess an ERIC document would be a duplication of time, effort, and money. Thus, documents already cataloged by ERIC or AIM/ARM should not be cataloged by the Information Service.

An alternative to reprocessing ERIC documents, while still having documentation in machine readable format, would involve identifying those items already indexed in ERIC or AIM/ARM by their ERIC (ED) or AIM/ARM (VT) numbers. Then, the full record for each number identified could be pulled from the ERIC-TAPES, owned by the I.U. Education Library, and the AIM/ARM tapes, owned by the National Center for Research in Vocational Education, and placed on new tapes. The new tapes could be reformatted to conform to the program used by the Information Service and merged with the Information Service's holdings. While this process would give the Information Service immediate access to all holdings, the programming costs would be heavy, and the continual updates and merges might become extremely expensive and hard to handle. Therefore, it seems inadvisable to implement this alternative, at least at the present time. If at a later time, the process becomes necessary, or seems monetarily feasible, the option will be available.

For the present, the least expensive and most utilitarian way to handle ERIC and AIM/ARM documents is to simply identify them as such and shelve them in order by their ED or VT numbers. The Information Service will not have immediate subject access to the documents, but access will be available through the ERIC indexes, *Resources in Education*, and Lockheed (see *Retrieval of Information and Materials*).

Although report literature will be a primary source of information, journal literature and ephemeral material must also be accessible by subject. Since journal articles are accessible by subject through many printed indexes (e.g. *Education Index* and *Current Index to Journals in Education*) and on-line data bases, it would be wasteful and redundant to index their content. Ephemeral materials, however, are not indexed by other systems so some subject access must be provided. The expense of indexing a document suggests that a vertical file would be a cost-effective way to organize this material. If a vertical file were used, materials would be filed by subject. Only one subject would be assigned and no cataloging would take place.

Proposed policy. Documents which have already been indexed by ERIC or AIM/ARM will be identified. They will be shelved in a separate section in order by their ED or VT number. Report literature which has not been classified and cataloged by ERIC or AIM/ARM will be indexed by the Information Service, assigned an IN number, and shelved in a separate section in order by IN number. A simple procedure to acquire, renew, and claim journals will be implemented. Journals will be shelved in a separate section in alphabetical order by journal title. Ephemeral materials will be placed in a vertical file which will be arranged by subject using ERIC descriptors and the proper names of states, organizations, etc. In addition to the ephemera, the file will contain copies of computer-produced bibliographies for re-use when appropriate, information about the states and territories, including state plans, and copies of tests and their manuals which relate to career, occupational, or vocational aptitudes or interests.

The Information Service collection will thus have four organizational categories: (1) ERIC and AIM/ARM documents, (2) IN documents, (3) journals, and (4) vertical file material. Although this is not an ideal situation, the small size of the collections, the closed nature of the use of the collections, and the substantial cost saving justify the four organizational catagories.

Storage of Materials

Proper storage of materials is a necessity. Documents stored in facilities appropriate to their format and in an humidity controlled environment are much less subject to destruction and therefore can be used for many years. In addition, properly stored and marked materials are easier to locate and reshelve, or refile.

Considerations. The physical environment provided by the I.U. Library is intended to preserve materials and is ideal for the Information Service.

Proposed policy. The documents will be shelved on slotted shelving which allows frequent side supports. This is an important consideration when shelving unbound materials. Vertical file material will be placed in file folders and put into filing cabinets.

To aid in the proper shelving and filing of material, each item must be marked. Documents which have ED, VT, or IN numbers will have that number written inside and a small paper label will be typed. The paper label will be adhered to the spine of the document, when the document is large enough, or to the upper left corner of the front. The label will be covered with an acetate cover to avoid smeared type and/or the removal of the label. Journals will have the first word of the title underlined when they are checked in to indicate proper alphabetic sequence for shelving. Materials for the vertical file will have the descriptor or proper name written on them to indicate to which folder they should be returned.

In addition to markings for physical location, each item will have the Information Service's name and address stamped on the title page and in one other location. This will assure that borrowed materials are returned to the proper location. Materials for loan will have a date due slip. Documents will be marked during their original processing.

Retrieval of Information and Materials

Retrieval is the process by which information and/or materials are recovered from the system to which they were input. The information sought can take many forms. The most common are (1) brief items of information contained in a document (reference), (2) citations to documents on a particular subject (literature search), and (3) actual documents. The Information Service will primarily engage in these three types of retrieval using all available resources to respond to user requests.

Reference.

The most commonly asked reference questions pertain to addresses, referral names, statistical information, inportant dates, and other specifics. They usually require a short answer and often can be answered from a few select sources.

Considerations. The location of the Information Service will play a large part in its ability to give good reference service. In addition to the reference collection developed by the Information Service (see *Selection*), the outstanding collections of the I.U. Libraries will be available to answer questions.

When printed material is not sufficient to answer questions, the personnel of the I.U. Library and the university as a whole will be available resources. Another advantage of the Information Service's location is the free availability of the Indiana Information Retrieval Service (INDIRS) which is a data base of statistical information about Indiana developed by the I.U. School of Business. This multitude of resources will facilitate rapid response to reference questions.

Proposed policy. Reference service will be provided to all who request specific information. Answers to questions will be provided first from access to INDIRS or the collection of the Service, second from the I.U. Libraries, third from other I.U. resources, and finally from any other persons and/or resources in Indiana or the country.

Literature Searches.

Literature searches are lists of bibliographic citations about a specific topic. They provide up-to-date lists of printed materials about a subject.

Considerations. Literature searches can take various forms and can be obtained in several ways. When a requestor wants only a few citations on a specific topic, checking the in-house bibliography file and the index to the holdings of the Information Service would most often be adequate. A request for a basic article or book on a subject could be generally answered by checking the I.U. Library card catalog or the government documents catalog for an appropriate citation. In neither case would an in-depth literature search be necessary.

A request for a detailed or comprehensive literature search would be answered more completely. If books and government documents are likely to have material relevant to the subject, a list of available books and documents could be compiled from the I.U. Library's card catalog and the government documents catalog. The retrieval of relevant journal articles and report literature, however, would require on-line searching.

There are several commercial services which offer on-line searching of numerous data bases. The most well known are DIALOG Information Retrieval Service offered by Lockheed Missles and Space Company, ORBIT offered by Systems Data Corporation (SDC) Search Service, BRS offered by Bibliographic Retrieval Services, and the New York Times Information Bank offered by the New York Times. At this time DIALOG and ORBIT offer over 70 data bases, and BRS offers 20. There is much overlap between the three services, but each has data bases available only through one source. The New York Times Information Bank accesses and abstracts much of the popular press and can be very useful in training fast facts and ready references.

To access any of these data files, it is necessary to contract with the appropriate company, acquire a terminal, and train a searcher. The charges for the services are assessed only when used; they include computer connect costs, long-distance phone charges, and an off-line printing charge. The connect charges range from $25.00 to $120.00 per hour, depending on the data base used. The phone charges are $5.00 per hour; a special phone line is required. The per citation off-line printing charges vary among data bases and depend on whether the record is printed with or without an abstract. The average charge is 10¢ per citation. The average cost of an on-line search is $12.00-$15.00, plus citation and personnel costs.

When on-line searching is compared to the traditional method of manually searching printed indexes, the savings in professional personnel time alone justify the use of on-line searching. When the further benefits of time-savings, more thorough searches and reduced or non-existent clerical personnel time are included, using an on-line system becomes almost mandatory. Therefore, the decision is not whether to use an on-line service, but which data base vendor to use.

All of the commercial vendors, Lockheed, SDC, and BRS, offer similar services at competitive prices. Each system, however, does have some different data bases, and these must be taken into consideration. Another important consideration is ease of access and user familiarity. Each vendor has a different set of commands which are used to search the system. If an operator is already familiar with one system, changing systems would mean costly training.

The I.U. Libraries contracted with Lockheed in July 1978, and the Information Specialist of the Information Service was trained on and has been using the Library's equipment to access the DIALOG system since that time. The Library has billed the Information Service for searches and has added a surcharge of $2.00 per search for the use of I.U.'s terminal. This has resulted in complicated scheduling procedures and additional costs to the Information Service. An alternative to this arrangement would be for the Information Service to rent its own terminal and contract independently. This would allow the Information Specialist to search at any time and to demonstrate searching capabilities at different locations. It would also eliminate the $2.00 surcharge.

If in the future, data bases offered through vendors other than the one that was initially contracted, become important to the Information Service, those vendors could also be contracted. Additionally, an evaluation of the types of reference requests encountered during year two should be made. This evaluation would assess the possible usefulness of the New York Times (NYT) Information Bank in answering these questions. If the NYT could have answered many of the questions coming into the Information Service, a contract with them should be considered for year three.

A final data base for literature searches will be the one created by the Information Service. As the data base is being created and as long as it is quite small, a search through the subject print-out should be sufficient. Eventually, searches will have to be submitted, batch mode, to the I.U. Computing Center. The software to be used, the FAMULUS program, does not currently allow on-line searching. The I.U. computing center does have plans for putting the FAMULUS program on-line, however, and eventually the data base may be accessible on-line.

Proposed policy. When a literature search requires that citations to books be included, the card catalogs of the I.U. Libraries will be used to compile a bibliography. To facilitate access to on-line search capabilities, a portable computer terminal will be rented by the Information Service and a contract with Lockheed Retrieval Service will be established. Lockheed will be contracted because the Information Specialist was trained on the DIALOG system and has found it well suited to the needs of the Information Service's users. On-line literature searches will be done in response to all requests for complete literature searches. The data base created by the Service will also be searched, using the subject print-out, in response to all literature search requests.

Documents.

Documents which have been cited in literature searches must be available to users whenever possible. Thus, a way to retrieve documents must be available.

Considerations. Document retrieval will depend on whether a document belongs to the Information Service or must be found elsewhere. If a requested document is not owned by the Information Service, a search of the I.U. Library's holdings would be conducted. At a minimum, the main card catalog, the Education Library catalog, and the government documents department should be searched in an attempt to find the item. If the Library does not have the item and it is badly needed, an interlibrary loan request should be considered.

Proposed Policy. Documents held by the Information Service will be located by number and pulled from the shelves. A check-out card will be filed out and the document will be dated due in one month and sent to the requestor. The circulation (check-out) file will be checked weekly. When items become overdue, a reminder notice will be sent to the borrower. When a document is in the I.U. system, it will be checked out to the Information Service as per an already established loan agreement with the I.U. Libraries. If the Library recalls the document before it is due at the Information Service, the Information Service will recall the item from the borrower. Journal articles will be photocopied and sent to the requestor. Other items will be photocopied and sent to the requestor. To assure that the Information Service complies with current copyright restrictions, records of what is copied will be maintained. Most copied items will be sent on a loan basis; this will save the Information Service the cost of making an additional copy when an item is requested a second time.

Dissemination

Dissemination is the process of getting information to those who need it. The dissemination process may be initiated in response to a request for information. It may also be initiated by a disseminator who perceives an unstated need and disseminates information to a selected group in response to that need.

Considerations. In keeping with its original intent, the Information Service must respond to requests for information as its first priority in dissemination. The Information Service must meet the needs of information requestors both quickly and completely. Evaluation of responses should be of prime concern to the Information Service. This evaluation should concern the quality and promptness of the response.

Once it is determined that user requests are being met, a second priority of dissemination efforts should be considered. The user needs survey conducted by the Information Service showed that state agency staffs were the most frequent users of information, and that they were frequently considered as a primary source of information. To make sure that state staffs have the most current information, a selected dissemination of information (SDI) service could be established.

SDI is a current awareness service. For each person to be served, an interest profile is developed. When new materials that fit a particular interest profile are acquired, those materials are sent to the appropriate person. This kind

of service would be particularly valuable in helping to keep the SBVTE staff and the staff of the Division of Vocational Education, Department of Public Instruction informed. If time and resources permit, it might eventually also be offered to personnel of SBVTE-funded projects.

Other types of out-reach dissemination must also be considered as the Information Service expands its capacity to provide information. For example, the principal investigator or director of all SBVTE-funded projects could be contacted shortly after funding, and the services of the Information Organization and Retrieval Service could be offered to them. Librarians and information specialists throughout Indiana could be advised of the Information Service so they could refer appropriate requests. Short workshops could be held for vocational educators and administrators to acquaint them with the multitude of resources available. There are many ways of disseminating information, and they should all eventually be considered as it is important that vocational educators in Indiana are aware of and are using the most current information available.

In addition, the Production and Dissemination Service of the Vocational Education Information Services has as its major objective, the dissemination of information. It produces a quarterly newsletter, *Communique*, and a series of information reports which are mailed to a wide audience in Indiana and a selected nation-wide audience. This is an important area of dissemination and in conjunction with the dissemination efforts of the Information Organization and Retrieval Service should be very effective in raising vocational educators' awareness of new and exemplary developments in the field.

Proposed policy. As a first priority in dissemination, the Information Service will respond to requests for information. Requests will be accepted in person, by phone, or by mail and responses will be made in the most expedient manner. A quick reference question will be answered by phone whenever possible. Requests for literature searches and documents will be answered by mail, UPS, or in person when it is necessary or convenient. All requests will be answered by the fastest means possible.

Records of all requests will be kept. These records will contain the date in, date out, topic requested, document requested, response, and cost (when an on-line search is involved). The records will be useful in identifying current information needs and in checking response time of the Information Service. A post card evaluation form will be developed and included with each mailed response. This continuing evaluation will be used to judge the Information Service's effectiveness and efficiency in responding to user requests. Additional dissemination efforts will be investigated and initiated as time and money allow.

Recommendations for Implementation

All of the proposed services and activities of the Information Organization and Retrieval Service section of the Vocational Education Information Services can not be implemented simultaneously. Many of the activities must have an operating procedure established and documented in an operating manual before they can be implemented. In addition, selection, cataloging, classifying, on-line searching, and document retrieval are time-consuming, and the staff available to the Information Service is limited. Therefore, priorities for implementing all parts of the plan must be established.

The first priority should be to give information and document retrieval services from available resources. The availability of the I.U. Library collections, staff, and services will allow the Information and Retrieval Service to provide information before its collections are organized and its procedures are established. As the capabilities and collections of the Information Service grow, reliance on the I.U. Libraries will diminish. Still, the Libraries will enable the Information Service to offer immediate services.

The second priority should be to disseminate information about the retrieval services available to a select target audience. This audience will be state agency personnel who were identified in the user needs study as being the most frequent users of all types of information and as sources of information for others. Additional users of the Information Service can be identified by state agency staffs.

Once the target audience is aware of the Information Service, internal operations can commence. Proper storage facilities should be identified and ordered, and organization of materials should begin. The vertical file material should be organized, ERIC and AIM/ARM documents should be identified, and cataloging and classification of the Indiana data base should begin. When the processes for organizing material have been established and documented and the original documents held by the Information Service have begun to be cataloged, the selection process should begin.

The final stage in the implementation should be to expand the dissemination efforts of the Information Service. This can only be done when the capabilities and capacity of the Information Service staff and collections has been tested.

Recommendations for Staffing

The director of the Information Organization and Retrieval Service should be a professional librarian with a masters degree in Library Science and a background in the field of education, either by experience or education. The director should have at least half-time clerical support during the early period of implementation. Once internal organizational processes begin, at least two part-time indexers, preferrably library school or vocational education students, should be hired. The indexers will be needed to catalog and classify the materials held by the Information Service. Once the backlog of materials has been cataloged, the number of indexers could be reduced to one.

Further Recommendations

The Vocational Education Information Services is a small but useful adjunct of vocational education efforts in Indiana. It provides information on research efforts relevant to vocational education and thereby promotes effective communication between researchers and research product users. The Services, however, can not, nor should it attempt to, meet the entire scope of vocational educators' information needs.

Needs for curriculum materials are being served by the Indiana Curriculum Materials Center (ICMC). Needs for materials and information about careers or vocational exploration are being addressed by the career resource centers.

These information and dissemination services and the Vocational Education Information Services are funded under contract to the SBVTE. Because the funding source is the same, it is imperative that duplication of services be avoided. The centers must work together to provide complimentary, not competitive, services to Indiana educators.

To work together, a system of communication must be established. The formation of a network consisting of these groups is highly recommended. The network could work together to establish priorities, goals, and procedures for serving state vocational educators.

The establishment of a vocational information network will be only a preliminary step in seeing that the information needs of all vocational educators are being met. Traditionally, Congress has separated the funding for vocational education from other educational funding. This has generated a split between the two groups, and duplicate services and activities have developed in both spheres of education with neither cognizant of the other. What neither group has realized, at least in Indiana, is that they have much to offer one another.

It is highly recommended that all groups working in the area of information and dissemination in education be identified by the network. Once identified, groups should be contacted with the eventual intention of forming a state-wide network of educational information and dissemination services and groups. Working cooperatively, this large group would benefit Indiana's entire educational system. Even if cooperation never becomes a reality, however, the awareness of one another will benefit everyone. For example, if the Vocational Education Information Services were seeking information on programs for special students, knowing the people working in special education information and dissemination would become an additional, and previously untapped, source. All fields of education are interrelated and have much to offer each other. It is important that they begin working together to provide the best information and dissemination services possible to all Indiana educators.

The Information Organization and Retrieval Service should be an independent organization which offers information services to vocational educators in Indiana. In addition, however, it must act as a catalyst which brings together the scattered information and dissemination activities taking place in Indiana. Though the pieces will never be brought together to form a whole, lines of communication will be established for the benefit of the whole.

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APPENDIX D

LIST OF PUBLICATIONS

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Cost-Effectiveness/Benefit Analysis of Postsecondary Vocational Programs, Technical Report, written by Jin Eun Kim. Develops a cost-effectiveness/benefit analysis model with data forms and a standard procedure for using the model. 1977, 64p. (ED 151 560)

Cost-Effectiveness/Benefit Analysis of Postsecondary Vocational Programs, Administrator's Manual, written by Jin Eun Kim. Summarizes the cost-effectiveness/benefit analysis model for postsecondary vocational education and provides guidelines for conducting cost-effectiveness/benefit analysis by following step-by-step procedures in the planning, implementing, and utilizing phases. 1977, 72p. (ED 151 559)

Development of a Cost-Effectiveness/Benefit Analysis Model and User's Manual for Postsecondary Vocational Programs, Final Report, written by Jin Eun Kim. Summarizes the activities of the project which developed the cost-effectiveness/benefit analysis model and step-by-step planning, implementing, and utilizing activities. 1977, 10p.

The Public's Perception of Secondary Vocational Education in Indiana, written by Betty A. Sawyers. Studies the general image of vocational-technical education as represented by a statistical sampling of respondents from five categories. 1977, 49p. Report Series No. 3. (ED 151 608).

A Plan to Organize Performance Based Auto Mechanics Programs and Derive Learning Content, written by Bill R. West and Dennis Brannock. Develops a data base with which to structure multi-occupational PBVE programs and to derive learning content that is job title specific. 1978, 52p. Report Series No. 4. (ED 154 244)

Research for Performance Based Vocational Education in Indiana, written by Bill R. West with an introduction by Ed Hornback. Outlines steps in the state's system for developing multi-occupational PBVE programs. 1978, 56p. Report Series No. 5. (ED 153 012)

Vocational Education Research and Exemplary Projects in Indiana, 1976, edited by Elaine G. Eigeman and Nancy E. Steenhausen. Abstracts and synthesizes research and development projects that were funded under Indiana's plan for improving vocational education programs. 1978, 70p. Report Series No. 6.

Keys to Success in Student Personnel Services, written by Dennis Fach, Charles Fields, Delmar Johnson, Marion Kersey, Lee Miller, and Richard Stith. Describes the Prosser Vocational Center model student personnel services program. 1978, 129p.

Reaching Out Through Vocational Education, Vocational Programs in the Indiana Department of Correction, written by George Wilkins. Describes vocational programs in the Indiana Department of Correction. 1978, 20p.

Copies of these reports, with the exception of *Keys to Success in Student Personnel Services*, are available from:

Vocational Education Information Services
Indiana University Library, W501
Bloomington, Indiana 47405

Phone: (812) 337-7751/6711

For information about *Keys to Success in Student Personnel Services*, contact:

Mr. Charles E. Fields
New Albany-Floyd County Schools
802 East Market Street
New Albany, Indiana 47150

Phone: (812) 945-6681

APPENDIX E

REPORT OF OBSERVATIONS, CONCLUSIONS
AND RECOMMENDATIONS TO
THE VOCATIONAL EDUCATION INFORMATION SERVICES

REPORT OF OBSERVATIONS, CONCLUSIONS, AND RECOMMENDATIONS TO THE VOCATIONAL EDUCATION INFORMATION SERVICES

by

Joel H. Magisos
June 2, 1979

General Statement

The Vocational Education Information Services project has reached the general goals stated in the proposal (10-1-77 - 9-31-79). Artifacts of project activity (e.g., Communique, Information Series) evidence high quality in every respect. The project staff members are well qualified, appear deeply committed to the project's objectives, and have shown remarkable professional growth. Based upon its earlier accomplishments, the project has potential for making a more comprehensive contribution to vocational education program improvement in Indiana by expanding its goals.

Progress Toward General Goals

A. To develop a comprehensive, multifunctional system for acquiring, organizing, storing, and disseminating research and development information which will meet the identified needs of vocational educators in Indiana.

The decision to associate with the Indiana University library, to limit the size of the local collection, and to provide services to high priority users have been both strategically sound and realistically necessary because of resource levels. The user survey will prove to be a useful tool for immediate decision making and will serve as a bench mark for later comparisons. The number

of requests serviced was small as had been planned and may serve as a baseline experience for expansion of these services if resources will permit. Efforts to articulate with other organizations have been especially commendable and constitute a real dimension of leadership which has been added to the state scene.

Consideration must be given to an expansion of search services or to referring requests to other service vendors so that local education agencies may have the direct benefit of this capability; however, giving priority to state-level policy and decision makers is wise. Should services be expanded, shelf products will be needed which can meet the needs of high frequency users. Reconfiguring shelf products from ERIC and RRS offers cost advantages. Future consideration might be given to electronic hook-up with collaborators within the state, development of a project tracking system linked to the National Center, and extensive user training efforts.

B. To continue to develop and disseminate publications of quality Indiana research and development products to appropriate state and national target audiences.

The completed products in the Technical Report series and Information series are a credit to Indiana and are undoubtedly useful, especially to vocational education administrators and program developers. They have high visual impact, meet external criteria (such as ERIC selection standards), and are an innovative approach to disseminating the results of state administered projects (i.e., a series rather than a hodge-podge of developer-initiated project reports). Commendable is the work done with

National Center staff to both develop and use a standard approach to publication formatting. This collaboration led to the Writer's Guide which has been distributed nationally and is being considered for inclusion with Federal solicitations for proposals and grant applications. Acceptance of the series was evidenced in conversation with an outside consultant, a developer, and a state administrator.

Some consideration should be given to differientiated targeting of publications to specific audiences in the state. This is not to say that the excellent series should be stopped, but that some "spin off" publications might be developed for other audiences. These might be in the form of brochures for school board members ("What is PBVE?"), pamphlets for administrators ("What would PBVE do for my school's vocational program?"), or handbooks for local directors ("How do I develop a PBVE program in my department?") The idea here is to put the right tools in the hands of all who must take part in a program improvement -- the policy maker, the administrator, and the vocational education practitioner. From time to time, it may be useful to synthesize several reports and related literature. We discussed several levels of knowledge transformation during my visit.

Some New Directions

Over time, the project has potential for providing more service, raising the quality of program improvement activity in the state, and linking resources (i.e., materials, ideas, and data) to programs.

The provision of more information search services was addressed earlier. There may be other services which grow out of regular activities and the contacts which the project has made; for example --

1. Referrals to state and national organizations
2. Referrals to consultants (Implies a data base on qualified people)
3. Distribution of others' products
4. Training in the use of information services and the use of research findings

Raising the quality of program improvement activities could be accomplished only with the full cooperation of the sponsoring agency. It could be developed incrementally by making interventions at various points in the process. A few examples follow:

1. Training workshops in proposal development
2. Literature searches for use in RFP development, assistance with RFP's
3. Assistance in the review and selection of contract bids
4. Preparation of bibliographies and/or publications for use by proposers and later by contractors
5. Training workshops for new project directors
6. Consultation with project directors on the specifications for planned products and reports; assistance with the reports
7. For the state office, review of draft products and recommendations of changes

8. Continuation of present publication development activity plus differientiation of product types.

Linking of resource systems to programs in need of assistance could be a very significant new direction for the project. The basis for such a service is in place (i.e., command of databases used for information services, communications metwork). The goal would be to find an appropriate resource and help to arrange assistance (i.e., training or technical assistance) in implementation. The idea here is to take responsibility for increasing probability of successful adoption, adaptation, and/or implementation rather than the less assertive role typical of most information providers.

Some Special Considerations

The future success of the project will depend, in a large measure, on the satisfaction of the sponsoring agency, host institution, and target audience.

The project should be working on the sponsor's priorities, accepting an instrumental role in doing so. The project's activities should be aimed at achieving the sponsor's goal for program change on improvement. Improvement in information services and dissemination capability will not be marketable without performance on the sponsor's priorities.

An institution usually expects some advantage, certainly no disadvantage, in hosting a project. We've discussed some ways in which the project could serve the instructional program, bring recognition to the institution, and extend the institution's outreach. Clearly, Indiana University does enjoy advantages in having the designation and the staff of the project.

The expansion of clientele will come naturally. Maintenance of a solid image with the target audiences through good performance will do much for both sponsor and institution.

Costs will predictably rise by inflation alone. If the project continues to develop as it should, the project staff and sponsor must face higher funding levels. The alternatives are decline or diversification. A lower budget would cut into staff and there aren't many staff members! Diversification of funding would be possible (i.e., taking an other work), but would likely change the emphasis and direction of the project.

I like your letterhead motto -- "to promote effective communication by meeting information needs". It has been most appropriate for the beginning phases of the project. Now you may want to emphasize "linkage" and "program improvement" in a new motto.